Bid Document

GUJARAT INFORMATICS LIMITED
(A Government of Gujarat Company)

GUJARAT INFORMATICS LIMITED
Block No.: 1, 8th Floor, Udyog Bhavan,
Sector 11, Gandhinagar - 382 010
Phone No.: 079 - 23256022, Fax No.: 079 - 23238925

Bid for Work of Campus Wide Area Networking and Extension of existing CWAN nodes in various Colleges on behalf of Directorate of Technical Education, Gandhinagar

Tender No. HWT170914246

Pre-bid meeting	:	**29.09.2014 on 1500 hours**
Last Date of Submission of Bid	:	**09.10.2014 till 1700 hours**
Date of Opening of Bid	:	**10.10.2014 at 1500 hours**

Bid Processing Fee: Rs. 5,000

Gujarat Informatics Limited (hereinafter referred to as "GIL"), for Directorate of Technical Education, Gandhinagar (hereinafter referred to as "the purchaser") for their requirement of Campus Wide Area Networking and Extension of existing CWAN nodes in various Colleges across Gujarat intend to invite offers through E-tendering route for work of Campus Wide Area Networking and Extension of existing CWAN nodes in various Colleges across the Gujarat State. **(Tender No. HWT170914246)**

Eligibility Criteria for the bidder:

1. Bidder should be a manufacturer or Authorized System Integrator, who must have supplied and successfully installed items similar to the type specified in the schedule of requirements to any of the reputed organizations / institutes in the country.

2. Bidder should provide details of legal status, place of registration and principle place of business of the company or firm or partnership etc. **(Form no. E-1)**

3. Bidder should have at least 3 years experience in setting up LAN system / solutions, and should have installed minimum 10 (200 Nos. of Nodes per LAN) LAN systems, out of which, 2 system should have minimum 300 nodes installed and operational in the same campus. Copy of Purchase order and Certificate of Successful Completion from Customer should be submitted. **(Form no. E-2)**

4. Bidder should attach Authorization certificate from the OEM of the equipment specified in Form, for the authenticity, authorized representation and after sales support. **(Form No. E-3)**

5. Bidder should have 15 skilled engineers / Manpower with minimum 2 years Experience. Information, educational qualifications, and experience details along with the projects they have handled should be provided with the bid. **(Form no. E-4)**

6. Bidder should have local presence and should have office in Gujarat. The bidder should have service support infrastructure in the state to provide warranty and post warranty services. Please attach the copy of any two of the following: Property tax bill/Electricity Bill/Telephone Bill/G.S.T.-C.S.T. Registration/Lease agreement etc. **(Form no. E-5)**

7. Bidder must have a total turnover of Rs. 15 Crore or more for the last three years. Copies of audited accounts of last three financial years must be attached with the bid. **(Form No. E-6)**

8. Manufacturer of the product (OEM) should be ISO 9001:2008 Process Certified for manufacturing. ISO certificates are required for items like Server, Ethernet Switches, Fiber Cable, UTP cable, Jack/Patch Panels, Information Outlets and UPS. **(Form No. E-7)**

9. If bidder is Consultants / firm, and any of its affiliates hired to provide consulting services for the preparation or implementation of a project under this tender, then bidder will be disqualified for providing goods or works or services related to the initial assignment for the same project.

Note:

1. Bidders who wish to participate in this bid will have to register on https://gil.nprocure.com. Further bidders who wish to participate in online bids will have to procure Digital Certificate as per Information Technology Act 2000 using which they can sign their electronic bids. Bidders can procure the same from (n) code solutions – a division of GNFC Ltd., or any other agency licensed by Controller of Certifying Authority, Govt. of India. Bidders who already have a valid Digital Certificate need not procure a new Digital Certificate.

2. **The bidder(s) qualified in Pre-qualification/Eligibility Criteria stage of Tender No. HWT050113182 is/are not required to upload the supporting document for eligibility criteria no. 3 (Experience), 5 (Manpower), 6 (Office) and 7 (Turnover).**

The Terms and Conditions are as follows:

1 The last date of submission of bid on the website **https://gil.nprocure.com** is 1700 Hrs **09.10.2014. No physical bids will be accepted under normal circumstances**. However, GIL reserves the right to ask the bidders to submit the bid and/or any other documents in physical form.

2 The bid is non-transferable.

3 **The Bidder may quote only one option (i.e. only one product can be quoted) against each item**. Bidders are required to mention make and Model of the product (Do not write "OEM" against items except the items asked to be integrated with Servers/Computers as bidders are expected to give make and model of the product).

4 The bidder will have to supply, install, maintain and provide training for hardware, software and peripherals and carry out necessary integration at offices/colleges located all across Gujarat State.

5 In case the quoted Item is not available in the market, the bidder will have to supply Higher Version/replacement of that Item in the quoted cost in the same time duration with prior approval of GIL/Purchaser. No "End of Life" product should be quoted to minimize such instances till the bid validity (Make & Model quoted by the bidder should be available till the bid validity, duly supported for spares / OEM support for warranty period).

6 The Bidder shall bear all the costs associated with the preparation and submission of its bid, and GIL in no case will be responsible or liable for these costs, regardless of conduct or outcome of bidding process.

7 The bidder has to upload the compliance letter on its letter head duly signed by the authorized signature and other supporting documents as asked for in the bid in scanned format. Failing to submit the same or non-compliance/deviation from any bid terms and conditions, eligibility criteria or technical specifications may result in rejection of the bid.

8 The Bidder has to examine all instructions, forms, terms, conditions and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the biding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

9 Amendment of Bidding Documents (Corrigendum)

9.1 At any time prior to the deadline for submission of bids, GIL may, for any reason, whether its own initiative or in response to the clarification request by a prospective bidder, modify the bidding documents.

9.2 The corrigendum will be published on website **https://gil.nprocure.com** & **www.gil.gujarat.gov.in**.

9.3 In order to allow prospective bidders reasonable time to take into consideration the amendments while preparing their bids GIL, at its discretion, may extend the deadline for the submission of bids.

10 Bid Currency – Prices shall be quoted in Indian Rupees only.

11 The Bidder will have to submit **Non refundable Bid Processing Fees of Rs. 5,000/- and Earnest Money Deposit (E.M.D.) of Rs. 11,50,000/- (Rupees Eleven Lac Fifty Thousand Only)** on or before the date and hours of opening of the bids in a sealed cover at GIL office with the heading "**Bid Processing fees and EMD for the E-tender No. HWT170914246 for Work of Campus Wide Area Networking and Extension of existing CWAN nodes in various Colleges on behalf of Directorate of Technical Education, Gandhinagar."** Bid Processing fees and E.M.D. must be in the form of Demand Draft in the name of "Gujarat Informatics Ltd." payable at Gandhinagar along with the covering letter. **Please affix the stamp of your company on the overleaf of demand draft.**

12 In case of non-receipt of Bid Processing fees and EMD as mentioned above within prescribed time the bid will be rejected by GIL as non-responsive.

13 Unsuccessful / Disqualified bidder's E.M.D. will be returned as promptly as possible but not later than 15 days after the expiration of the period of bid validity OR upon the successful Bidder signing the Contract, and furnishing the Performance Bank Guarantee @ 10% of the total order value as prescribed by GIL, whichever is earlier.

14 In exceptional circumstances, GIL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. A Bidder may refuse the request without forfeiting its E.M.D. A Bidder granting the request will not be permitted to modify its bid.

15 The Successful bidder has to submit Performance Bank Guarantee @ 10% of total order value within 15 days from the date of issue of Purchase order for the duration of warranty from any Nationalized Bank including the public sector bank or Private Sector Banks authorized by RBI or Commercial Bank or Regional Rural Banks of Gujarat or Co-Operative Bank of Gujarat (operating in India having branch at Ahmedabad/ Gandhinagar) as per the G.R. no. EMD/10/2013/107/DMO dated 06.04.2013 issued by Finance Department. (The draft of Performance Bank Guarantee is attached herewith).

16 Successful bidders will have to sign the contract upon receiving the Purchase order with the purchaser(s) within 15 working days from the date of Purchase order. (The draft of the Contract form is attached herewith)

17 The successful Bidder's E.M.D. will be returned upon the Bidder signing the Contract, and furnishing the Performance Bank Guarantee @ 10% of the total order value and offer of inspection of the ordered material.

18 The E.M.D. may be forfeited:

(a) if a Bidder withdraws its bid during the period of bid validity

(b) In case of a successful Bidder, if the Bidder fails:

(i) To sign the Contract as mentioned above or

(ii) To furnish performance bank guarantee as mentioned above or

(iii) If the bidder is found to be involved in fraudulent practices.

19 Termination for Default:

19.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Bidder, terminate the Contract in whole or part:

a) if the bidder fails to deliver any or all of the Goods within **135 working days** from the date of purchase order, or within any extension thereof granted by the Purchaser or

b) if the Bidder fails to perform any other obligation(s) under the Contract/Purchase order.

c) If the Bidder, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

"Corrupt practice" means the offering, giving, receiving or soliciting of anything of value of influence the action of a public official in the procurement process or in contract execution.

"fraudulent practice : a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the purchaser, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the purchaser of the benefits of free and open competition;"

19.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to Clause 19.1 above, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Bidder shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Bidder shall continue the performance of the Contract to the extent not terminated.

20 Price shall be inclusive of all freight, forwarding, transit insurance and installation charges.

21 Prices shall be inclusive of Excise Duties. The prices shall strictly be submitted in the given format. Quoted prices shall be inclusive of all taxes except C.S.T. / VAT / Service Tax. The tax components like C.S.T. / VAT / Service Tax as applicable shall be mentioned separately in the respective columns.

22 Late Bids – The bidder will not be able to submit the bid after final submission date and time.

23 Modification and Withdrawal of Bids

23.1 No bids will be allowed to be modified subsequent to the final submission of bids.

23.2 No bid will be allowed to withdrawn in the interval between the deadline for submission of bids and the expiry of the bid validity. Withdrawal of a bid during this interval will result in the forfeiture of bidder's E.M.D.

24 Bids will be opened with the buyer's private digital key in the presence of Bidder's representatives, who choose to attend. The Bidder's representatives who are present shall sign a register/attendance sheet evidencing their attendance. The representative will be held responsible for all commitments made on behalf of the bidder and that will be considered valid for all further dealings related to this tender process. In the absence of the bidder(s), the tender committee may choose to open the bids as per the prescribed schedule.

25 The Bidder's names, Bid modifications or withdrawals, discounts and the presence or absence of relevant E.M.D. and such other details as GIL/GOG officer(s) at their discretion, may consider appropriate, will be announced at the opening.

26 **Evaluation of the Bids:** After the closing time of submission, GIL/GOG committee will verify the submission of Bid Processing Fees and EMD as per bid terms and conditions. The eligibility criteria evaluation will be carried out of the responsive bids. The technical bids of the bidders who are complying with all the eligibility criteria will be opened and evaluated next. The financial bid of the technically qualified bidders will be opened and financially L1 bidder will be decided from the sum total of prices for all line items without tax with **5 years warranty** and then called for further negotiations if required.

27 The order may be split among a number of technically qualified bidders at the discretion of GIL/Purchaser. The bidder with overall competitive quote will be given preference on the ordered quantity.

28 **The bidder will have to offer the inspection at EQDC, Gandhinagar and in the manner as decided by GIL** before delivering to the respective sites or at customer sites. The cost of the same has to be borne by the supplier. Any deviation found in the specification of the produced goods or delivered goods after inspection from the tender specifications will lead to the cancellation of the order, forfeiture of EMD/PBG and prohibition in the participation in the future purchase of Government of Gujarat. GIL/GoG will not be responsible for any time delay which may arise due to any deviation from the bid technical specification found at the time of inspection and the bidder has to deliver and install the ordered goods within prescribed time limit. **At the time of inspection, bidder is required to produce OEM's confirmation on OEM's Letter head with Sr. nos. of Equipment and Software supplied for back to back warranty support as per tender terms and conditions.**

29 The indenter's right to inspect, test and, where necessary, reject the Goods after the Goods arrival at Customer Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.

30 **Delivery and Installation:** The entire project of campus area networking will be completed within **135 working days** from the date of award of contract including time incurred during inspection. **The successful bidder has to carry out the site survey as per the schematic network diagram given in bid document and submit the change (if any) in Network diagram, Schematic Diagram and Routing diagram and obtain the approval from the College/Institute within 30 days.**

31 Bid validity will be of **120 days after the date of price bid opening.** A bid valid for shorter period shall be rejected as non-responsive. **If required, GIL may extend the bid validity for further period from the date of expiry of bid validity in consultation with the successful bidder.**

32 Bidders are required to quote all items including optional add-ons as well. Incomplete bids will be treated as non-responsive and will be rejected.

33 **Penalty Clause:**

33.1 If the bidder fails to complete The entire project of campus area networking within 135 working days from the issue of the confirmed purchase order, then a sum equivalent to one percent (1 %) of the total contract value shall be deducted from the payment for each calendar week of delay or part thereof.

33.2 Delay in excess of 23 weeks from the date of confirmed purchase order will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited.

33.3 In case, the selected bidder does not supply the ordered items for any reason, the bidder will be liable to pay the difference amount to the purchaser, over and above the performance guarantee, which indenter department has to pay to the next or other selected bidder for purpose of the said items.

34 **Warranty:**

34.1 **Warranty:** As per Special Terms and Conditions.

34.2 If any equipment and related components gives continuous trouble, say six times in one month during the warranty period, the bidder shall replace the same with new without any additional cost to the purchaser.

34.3 Maintenance service

34.3.1 Free maintenance services shall be provided by the Bidder during **the period of warranty.**

34.3.2 The maximum response time for maintenance complaint from any of the destinations specified in the Schedule of Requirements/Purchase order(s) (i.e. time required for bidders maintenance engineer to report at the installation after a request call/telegram is made or letter is written) shall not exceed 24 hrs.

34.4 During warranty period, if the complaint is not resolved within 72 hrs the penalty of Rs. 500 per day for Server, Networking Switch and Gateway Security Appliance and for Peripherals or other networking components the penalty of Rs. 200 per day will be levied. However, if the complaints not resolved within 7 days then from 8th day to 14th day, penalty would be levied @ 150% and from 15th day onwards penalty @ 200% of the above rates would be levied. The amount of penalty will be recovered from the Performance bank guarantee during warranty period.

34.5 In case an item is not usable beyond the stipulated maximum downtime the bidder will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate repair/replacement will be liable for penalty of RS. 500 per day for Server, Networking Switch and Gateway Security Appliance and RS. 200 per day for Peripherals or other networking components. The amount of penalty will be recovered from the Performance bank guarantee during warranty period.

34.6 The Bidder/System Integrator will be required to co-ordinate with software vendor and/or do liaisoning with other service provider to achieve the end-to-end connectivity. This also includes Server OS configuration with respect to LAN/WAN technologies implementation.

35 **Payment:** Payment for Goods and Services shall be made by the Indenting Department in Indian Rupees as follows:

35.1 No advance payment will be made.

35.2 90 % payment after successful inspection, Delivery and installation of the ordered goods. The inspection will be done as decided by GIL.

35.3 Remaining 10% payment will be made after completion of the users' operational training of the ordered goods to the purchaser's staff.

36 GIL reserves the right to change any bid condition of any item even after inviting the bids, with/without prior notification.

37 GIL's Right to accept any Bid and to reject any or all Bids – GIL reserve the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to awarding the Contracts, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for such decision.

38 The tendered quantities are estimated based on the receipt of the requirement from Directorate of Technical Education. The quantities may decrease up to 50% of the bid quantity or increase up to 30% of the bid quantity at the time of finalization, depending upon the change in the requirements/grants available with the purchaser(s), which shall be binding to the bidder.

39 All correction/addition/deletion shall require authorized countersign.

40 **Limitation of Vendor's Liability:** Notwithstanding anything contained in the Contract, Vendor's liability will be only for actual direct damages and shall be capped and limited to double the charges or the amounts paid or due and payable to Vendor for the Services that are the subject of the claim.

41 Force Majeure Shall mean and be limited to the following:

a) War / hostilities
b) Riot or Civil commotion
c) Earthquake, flood, tempest, lightening or other natural physical disaster.
d) Restrictions imposed by the Government or other statutory bodies which prevents or delays the execution of the order by the BIDDER.

The BIDDER shall advise GIL by a registered letter duly certified by the local statutory authorities, the beginning and end of the above causes of delay within seven (7) days of the occurrence and cessation of such Force Majeure Conditions. In the event of delay lasting over two months, if arising out of causes of Force Majeure, GIL reserves the right to cancel the order.

Completion period may be extended to circumstances relating to Force Majeure by the GIL. Bidder shall not claim any further extension for completion of work. GIL/GoG shall not be liable to pay extra costs under any conditions.

The BIDDER shall categorically specify the extent of Force Majeure conditions prevalent in their works at the time of submitting their bid and whether the same have been taken in to consideration or not in their quotations. In the event of any Force Majeure cause, the BIDDER shall not be liable for delays in performing their obligations under this order and the delivery dates can be extended to the BIDDER without being subject to price reduction for delayed delivered, as stated elsewhere.

It will be prerogative of GIL/GoG to take the decision on force major conditions and GIL/GoG decision will be binding to the bidder.

42 Bidders can seek written clarifications **at least 5 days before the date of pre-bid** to Deputy General Manager (Tech), Gujarat Informatics Ltd., 8th Floor, Block No. 1, Udyog Bhavan Gandhinagar 382010. GIL will clarify and issue amendments if any. No further clarification what so ever will be entertained.

The bid should be submitted on the website https://gil.nprocure.com on or before 1700 Hours, **09.10.2014.**

The Technical Bids will be opened on **10.10.2014 at 15:00 Hours at GIL, Block No. 1, 8th Floor, Udyog Bhavan, Gandhinagar** in the presence of the committee members and representatives of the bidders, who have submitted valid bids. Only one representative from each bidder will be allowed to attend the tender opening. The representative will be held responsible for all commitments made on behalf of the bidder and that will be considered valid for all further dealings related to this tender process.

Please address all queries and correspondence to

Shri Vivek Upadhyay, DGM (Technical),
Gujarat Informatics Limited
Block No. 1, 8th Floor, Udyog Bhavan,
Gandhinagar - 382010
Phone No. 079-23259239,
Fax No. 079-23238925,
E-mail: viveku@gujarat.gov.in

Fax/email should be followed by the post confirmation copy.

SECTION I

Bid Processing Fees and Earnest Money Deposit Details:

Sr. No.	Item	Amount (In Rs.)	Name of the Bank and Branch	Demand Draft No.
1	**Bid Processing Fees**			
2	**Earnest Money Deposit (E.M.D.)**			

ELIGIBILITY CRITERIA

Form No. E1: Details of Bidder:

Details of Bidder				
1.	Name of the Bidder and Address of the Bidder			
2.	Status of Bidder (Proprietorship Firm/ Partnership Firm/ Public Limited Company/ Private Limited Company)			
3(a)	In case of Company:			
3a.1	Details of Incorporation of the Company (Attach Copy of Certificate)			Date:
				Ref. #
3a.2	Details of Commencement of Business (Attach Copy of Certificate)			Date:
				Ref. #
3a.3	Company Identification Number (CIN)			
3a.4	Registered Office of the Company :			
3a.5	Composition of the Board of Directors of the Company. Please furnish Name, Designation and their DIN.			
3a.6	Name of Company Secretary of the Company and his/her Membership No.			
3(b)	In case of firm:			
3b.1	Name of Partners and Their Designation if any			
3b.2	Date of Registration of Firm (Attach copy of Registration)			
3(c)	In case of Proprietorship: (Attach copy of Registration)			
	Name of Proprietor:			
4	Place of Business with Full address:			
5	Name and address of the Statutory Auditors of Bidder for the Financial years 2011-12, 2010-11 & 2009-10			
6	Valid Value Added Tax registration No. and Date (Attach copy of Registration)			
7	Valid Service Tax registration No. and Date (Attach copy of Registration)			
8	Permanent Account Number (PAN) (Attach copy of Registration)			
9	Name and Designation of the contact person to whom all references shall be made regarding this tender			
10	Telephone No. (with STD Code)			
11	E-Mail of the contact person:			
12	Fax No. (with STD Code)			
13	Website			
14	Financial Details (As per Audited Accounts) (Rs. in Lacs):			
	Year	**2010-2011**	**2011-2012**	**2012-13**
	Total Turnover			
	PAT			

Form No. E2: Experience Details (Customer References):

Sr. No.	Name of the Organization	Contact Person	Contact telephone no. & Address	Date/Period of implementation	Please specify no of nodes installed and Operational within same campus	Type of Supporting Document Attached
1						
2						
.						

Note: Please fill this form and upload the supporting documents for each customer reference in scanned format. Failing the same may lead to the rejection of the bid. You may add the customer references by adding multiple rows which may be added by "NUMBER OF ROWS TO ADD".

Form no. E3: Authorization Letters:

Sr. No.	Item	Make and Model	Name of OEM	Authorization Letter Attached? (Yes/No)
1	Data Server			
2	L3 / L2 Switch and Wireless Products			
3	Gateway Security Appliance			
4	3 KVA Online UPS for Central Network			
5	600 VA Line Interactive UPS			
6	Passive Components (Fiber and Copper with Accessories)			

Form No. E4: Engineer's Details:

Sr. No.	Name of Engineer	Date of Joining the Organization	Engineer's Contact Details	Education Qualification	Experience Details	Involved in project (Name of project)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
.						

Note: Please fill this form. You may add the engineer's details by adding multiple rows which may be added by "NUMBER OF ROWS TO ADD".

Form No. E5: Office / Service Center in Gujarat:

Sr. No.	Address	Contact Person	Contact Nos.	Type of supporting document attached
1				
2				

Note: You may mention more than one office / service center (if applicable) by adding multiple rows which may be added by "NUMBER OF ROWS TO ADD".

Form No. E6: Financial Strength of the Bidder:

Financial Year	Turnover (Rs. In Crore)	Audited Accounts uploaded? (Yes/No)
2010-11		
2011-12		
2012-13		
Grand Total		

Note: Please fill this form and upload the Audited Annual Accounts / Balance Sheet along with Profit & Loss Account for the last three financial years.

Form no. E7: ISO 9001:2008 Certification for Manufacturing:

Sr. No.	Item	Make and Model	Name of OEM	ISO Certification valid up to	ISO Certification Uploaded? (Yes/No)
1.1	Layer 3 Switch				
1.2	24 Port Layer 2 Switch				
1.3	Mini GBIC 1000LX transceiver port				
1.4	RPS Power Supplies with Chassis for L3 Switches				
2	Gateway Security Appliance				
3.1	3 KVA Online UPS for Central Network				
3.2	600 VA Line Interactive UPS				
4	Data Server				
5.1	Wireless Access Controller				
5.2	Wireless Access Point (Indoor Access Point)				
5.3	Wireless PCI Card				
5.4	4 Port PoE Injector				
7.1	42 U Rack				
7.2	24 U Rack				
7.3	12 U Rack				

7.4	9 U Rack				
8.1	Cat-6 UTP Cable - 305 Meters Box				
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter				
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter				
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box				
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager				
9.1	Single Mode Fiber Cable				
9.2	Fiber SM-SC Couplers and Pigtail x				
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber				
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)				
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)				

Note: Please fill this form and upload the supporting documents in scanned format.

SECTION II

Form No. T1: Make & Model List:

Sr. No.	Item	Make and Model	Supporting Document attached? (Yes/No)
1.1	Layer 3 Switch		
1.2	24 Port Layer 2 Switch		
1.3	Mini GBIC 1000LX transceiver port		
1.4	RPS Power Supplies with Chassis for L3 Switches		
2	Gateway security Appliance		
3.1	3 KVA Online UPS for Central Network		
3.2	600 VA Line Interactive UPS		
4.1	Data Server		
4.2	18.5” LCD Monitor		
5.1	Wireless Access Controller		
5.2	Wireless Access Point (Indoor Access Point)		
5.3	Wireless PCI Card		
5.4	4 Port PoE Injector		

6.1	Impacting Tool		
6.2	Crimping Tool		
6.3	Cable Tester		
7.1	42 U Rack		
7.2	24 U Rack		
7.3	12 U Rack		
7.4	9 U Rack		
8.1	Cat-6 UTP Cable - 305 Meters Box		
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter		
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter		
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box		
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager		
8.6	1.5" Size PVC Cap on Casing with Accessories need to be installed where ever required.(As per Actual Qty req at Site)		
8.7	1.5" Size PVC Pipe with Accessories need to be installed where ever required.(As per Actual Qty Req at Site)		
9.1	Single Mode Fiber Cable		
9.2	Fiber SM-SC Couplers and Pigtail x		
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber		
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)		
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)		
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)		
9.7	25mm Class B category ISI mark GI Pipe (As per Actual Qty Required at Site) (In Mtr.)		

Note:

1. **You may quote only one option against any item.**
2. **Please Write N.A. if the Make & Model is not available.**

Form No. T2: TECHNICAL MINIMUM SPECIFICATIONS:

Active Components				
Item No. 1.1 - Layer 3 Switch				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation /Remarks (If any)**
1.1	**General:**	8		
	Make and Model Number with necessary brochures must be given			
	Chassis based switch			
	Inbuilt Redundant load sharing AC power supply			
	Redundant switching fabric			
	Switching backplane capacity of 480 GBPS or more			
	Forwarding rate 274 million pps			
	Forwarding mode Store and Forward			
	Number of Ports and Interface/Standard			
	Switch should be chassis based architecture			
	Switch shall be loaded with 24 # 10/100/1000 Base T Ports and 24 # MiniGBIC SFP ports			
	shall be loaded with min 2 # 10G ports			
	Compliant to IEEE 802.3ae compliance			
	IEEE 802.3 compliance			
	IEEE 802.3u compliance			
	Support full duplex operations LAN			
	IEEE 802.3x Flow Control support for Full-Duplex mode			
	Support Full-Duplex Operation only			
	Supports Wire speed Layer 3 switching			
	SFP Transceivers Supported:			
	1000SX/ LX/ LHX/ ZX / 100FX			
	MAC Addresses			
	Min 32K MAC address			
	Manageability:			
	SNMP v1, v2, v3, RMON (4 Groups), SIM Technology (Single IP Management) with IP clustering / Stacking support			
	Command Line, Web based Management, Port Mirroring and Syslog			
	TFTP based Firmware upgrade			
	DHCP server, Relay, Client.			
	Features			
	Layer 3 Switching and Routing			
	Spanning Tree Protocol (IEEE 802.1D, 802.1W and 802.1S)			

	VLAN Support (IEEE 802.1q support up to 4000 VLAN and 255 VLAN groups (Port Based/802.1p/GVRP/GARP)			
	QinQ			
	Broadcast / Multicast / Unicast Storm Control			
	Port/ MAC/ IP segment/ Protocol/ Private/ Vlan support			
	IGMP v1/v2/v3 and IGMP Snooping v1/v2/v3			
	Link aggregation as per IEEE 802.3ad with max 128 group trunk with max 8 ports for each trunk			
	Both static and dynamic link aggregation with load balancing			
	802.1p Priority (8 Queues), DiffServ QoS, Strict priority, WRR, SWRR or equivalent			
	Hybrid queuing of Strict priority + WRR.			
	IEEE 802.1x, SSH, TACACS (+), RADIUS support, prevention for DOS attacks, ARP Inspection			
	Standard and Extended Access control, Time based ACL			
	RIP1/2, OSPF, BGP4, RIPng, OSPFv3, BGP4+ for IPv6			
	PIM-DM, PIM-SM, PIM-SSM, PIM-SM/DM for IPv6			
	MLDv1/v2, MLD snooping V1/v2			
	VRRP, VRRP v3			
	IPv6 ready from Day 1			
	IPv6 Host / Management and IPv6 complete Routing from Day 1			
	Telnet Support for Management			
	Switch should contain following items:			
	Power cable			
	Null modem cable or equivalent console port to login to device for initialization			
	Rack-mount kit			
	Installation guide			
	Resource CD-ROM with User Manual			

Item No. 1.2 - 24 Port Layer 2 switch (Gigabit Switch)

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation /Remarks (If any)
1.2	**General:**	308		
	Make and Model number with necessary broachers must be given			
	Rack-mount size			
	Number of Ports:			
	24 x 10/100/1000 Gigabit Ethernet ports, 4 shared SFP slots for 1000LH/LX /100FX fiber transceivers			
	IEEE 802.3 10BASE-T/802.3u 100BASE-TX/100FX			
	IEEE 802.3ab 1000BASE-T/802.3z 1000BASE-SX/LX			
	Stackable in nature with IP clustering			
	Static IP Routing			

	SFP Supports:			
	IEEE 802.3z 1000BASE-LX			
	IEEE 802.3z 1000BASE-SX			
	IEEE 802.3z 1000BASE-LH			
	VLAN:			
	IEEE 802.1q tagged Port base VLAN			
	Maximum number of VLANs per Device : Maximum 255 Static and 4K VLAN ID			
	Private VLAN or Equivalent			
	Priority Queues:			
	Standard IEEE 802.1p			
	Minimum 4 Queues			
	SP, WRR queuing			
	Access control and security:			
	802.1x based port control			
	MAC based port security through ACL			
	Standard and Extended ACL			
	Spanning Tree Protocol:			
	802.1d Spanning Tree			
	802.1w Rapid Spanning Tree			
	802.1s Multiple Spanning Tree			
	Port Trunk:			
	802.3ad Compatible Link Aggregation (LACP)			
	Ports per trunk : Maximum 8			
	Trunks per Device : Maximum 32			
	Operation Mode : Load Sharing			
	Multicasting			
	IGMP v1/v2/v3 Snooping			
	Multicast VLAN registration			
	Performance:			
	Switch Fabric speed : Minimum 56 GBPS			
	Packet Forwarding Rate : Minimum 38.6 Mpps			
	Transmission Method : Store and Forward type			
	MAC Address table : Minimum 8000			
	IPv6 ready from Day1			
	IPv6 Ping/tracert, Telnet, DNS Resolver, RADIUS, TACACS+, Syslog ,SNTP , NTP, FTP/TFTP sFlow or equivalent			
	IPv4/IPv6 Dual Protocol Stack (RFC2460), IPv6 Unicast and Multicast Address Types, IPv6 VLAN registration, ICMPv6 Redirect			
	SNMP over IPv6, HTTP over IPv6, SSH over IPv6, DNS over IPv6, DHCPv6 Server			

	Management Support:			
	Trace Route command			
	Single IP management V1			
	DHCP Server / Client, DHCP snooping, DHCP Option 82.			
	SNMP v.1,v2c,v.3			
	RMON Monitoring			
	Web Based Management			
	Telnet Server			
	Command Line Interface			
	Switch should contain following items:			
	Power cable			
	Null modem cable or equivalent console port to login to device for initialization			
	Rack-mount kit			
	Installation guide			
	Resource CD-ROM with User Manual			

Item No. 1.3 -Mini GBIC 1000LX transceiver port

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation /Remarks (If any)
1.3	Small Form Factor Pluggable module – Mini GBIC 1000 based LX module to support Gigabit speeds over 9/125 Single mode Fiber up to a distance of 10kms.	157		

Item No. 1.4 – RPS Power Supplies with Chassis for L3 Switches

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation /Remarks (If any)
1.4	Should provide power supply for more than 100 watts ***(support equivalent to the power requirements of the core switches quoted for in the tender)***	8		
	Suitable for providing back up power for switch in case of failure of main power supply.			
	I/P voltage range of 115-203 VAC			
	I/P frequency range of 47-63 Hz			
	Chassis should allow 2 RPS modules to be deployed in standard rack.			
	RPS Modules installed in this chassis will be connected directly to AC			

Security Appliance				
Item No. 2- Gateway Security Appliance				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation /Remarks (If any)**
2	**General Specification**	3		
	UTM should be fully featured with AV/AS/IPS/Content Filtering and On Appliance reporting			
	Product or OEM should be ISO 9001-2008 Certified			
	OEM should have regional presence for sales & support			
	Proposed appliance should support storage of Logs & reports internally or externally.			
	Proposed solution should comply FCC and CE norms			
	The proposed solution should match following criteria.			
	a. Hardware platform must be 64 bit			
	b. Must be based on ASIC OR Multicore Parallel Processing Architecture			
	c. 8 number of 10/100/1000 interface with optional: 8 number 10/100 Switching ports			
	d. 15000 number of new connection			
	e. 500,000 number of concurrent connection			
	f. 5.0 Gbps Firewall throughput			
	g. 650 Mbps IPS throughput			
	h. 400 Mbps of VPN throughput			
	i. Minimum 1.5 Gbps of AV throughput			
	The proposed solution should have unrestricted user/node license.			
	The proposed solution must work as standalone HTTP proxy server with integrated Firewall, Anti Virus, Anti Spam, Content filtering, IPS.			
	The proposed solution must support User based policy configuration for security & internet management.			
	The proposed solution should provide on appliance reports based on user not only on the base of IP address.			
	Proposed appliance should support MIX mode deployment.			
	The proposed solution should have an option of inbuilt Web Application Firewall to protect web servers hosted in the network for protection against SQL Injections, Cross-Site Scripting (XSS), Session Hijacking, URL Tampering, Cookie Poisoning with Extensive reporting and Logging.			
	Administration, Authentication & General Configuration			
	The proposed solution should support administration via secured communication over HTTPS, SSH and from Console.			
	The proposed solution should be able to export and import configuration backup including user objects			
	The proposed solution should support Route (Layer 3)/ transparent mode (Layer 2).			

	The proposed solution should support integration with Windows NTLM, Active Directory, LDAP, Radius or Local Database for user authentication.			
	The proposed solution must support automatic transparent Single Sign on for user authentication. SSO must be proxy independent and support all applications for authentication.			
	The proposed solution should support Dynamic DNS configuration.			
	The proposed solution should provide bandwidth utilization graph on daily, weekly, monthly or yearly for total or individual ISP link.			
	The proposed solution should provide real time data transfer/bandwidth utilization done by individual user/ip/application.			
	The proposed solution should support Parent Proxy with IP/FQDN support.			
	The proposed solution should support NTP.			
	The proposed solution should support user/ip/Mac binding functionality to map username with IP address & MAC address for security reason.			
	The proposed solution should have multi lingual support for Web admin console.			
	The proposed solution should support Version roll back functionality.			
	The proposed solution should support session time out & Idle time out facility to forcefully logout the users.			
	The proposed solution should support ACL based user creation for administration purpose.			
	The proposed solution should support LAN bypass facility in case appliance is configured in Transparent mode.			
	The proposed solution should support inbuilt PPPOE client and should be capable to automatically update all required configuration whenever PPPOE get changed.			
	The proposed solution should support SNMP v1, v2c & v3.			
	The proposed solution must be firmware based instead of normal software with capability to keep two firmware instant roll back.			
	The proposed solution must provide flexible, granular role-based GUI administration.			
	The proposed solution must provide support of multiple authentication servers for each module (Firewall, Different type of VPN)			
	The proposed solution must support of Thin Client (Microsoft TSE, Citrix) authentication and must be able to differentiate users coming from same IP address.			
	The proposed solution should support Guest user authentication through SMS			
	Multiple ISP load balancing and Failover			
	The proposed solution should support load balancing & failover for more than 2 ISP.			
	The proposed solution should support explicit routing based on Source, Destination, Username, Application.			
	The proposed solution should support weighted round robin algorithm for Load balancing.			
	The proposed solution should provide option to create failover condition on ICMP, TCP or UDP protocol to detect failed ISP connection.			

	The proposed solution should send alert email to admin on change of gateway status.			
	The proposed solution should have Active/Active (Round Robin) and Active/Passive gateway load balancing and failover support.			
	High Availability			
	The proposed solution should support High Availability Active/Passive or Active/Active			
	The proposed solution should be ICSA certified High Availability solution.			
	The proposed solution should send notification to admin on change of appliance status in High Availability.			
	The HA traffic between two peers must be encrypted.			
	The proposed solution should support Link, device & Session failure.			
	The proposed solution should support automatic & manual synchronization between appliances in cluster.			
	Firewall			
	The proposed solution should be standalone appliance with hardened OS.			
	The proposed solution should be ICSA OR Webcoast checkmark certified firewall.			
	The proposed solution should support stateful inspection with user based one-to-one & dynamic NAT, PAT.			
	The proposed solution must support user identity as matching criteria along with Source/Destination IP/Subnet/group, destination Port in firewall rule.			
	The proposed solution should facilitate to apply unified threat policy like AV/AS, IPS, Content filtering, Bandwidth policy on firewall rule for ease of use, also unified threat controls must be applied on inter zone traffic.			
	The proposed solution should support user defined multi zone security architecture.			
	The proposed solution should have pre-defined application based on port/Signature & also support creation of custom application based on port/protocol number.			
	The proposed solution should support inbound NAT load balancing.			
	The proposed solution should support 802.1q VLAN tagging support.			
	The proposed solution should support dynamic routing like RIP1, RIP2, ISPF, BGP4.			
	The proposed system should provide alert message on Dash Board whenever non secure access is allowed & module subscription is expiring.			
	The proposed solution must be support IPv6 as per www.ipv6ready.org guidelines			
	The proposed solution must support 3G UMTS, GSM, GPRS modem via USB interface for VPN and Gateway Failover - Load Balancing.			
	The proposed solution should support Fully Qualified Domain Name (FQDN) based host and host group.			
	The proposed solution should support Differentiated Services Code Point (DSCP)			
	IPS			

	The proposed solution should be **NSS or** webcoast checkmark certified.			
	The proposed solution should have signature based and protocol anomaly based Intrusion prevention system.			
	The proposed solution should have 3500+ signature database.			
	The proposed solution must support creation of custom IPS signature.			
	The proposed solution must support creation of multiple IPS policy for different zone instead of blanket policy at interface level.			
	The proposed solution must support configuration option to disable/enable category/signature to reduce the packet latency.			
	The proposed solution should give username along with IP in IPS alerts and reports.			
	The proposed solution should automatically takes update from update server.			
	The proposed solution must support blocking of anonymous open HTTP Proxy running on 80 port or any other port & also should support client based open proxy like Ultra surf.			
	The proposed solution should able to detect & block known P2P based instant messaging application like Skype & known chat application like WLM, Rediffbol etc.			
	The proposed solution should generate the alerts for attacks			
	The proposed solution should generate historical reports based on top alerts, top attackers, severity wise, top victims, protocol wise.			
	Gateway Anti Virus			
	The proposed solution should have an integrated Anti Virus solution.			
	The proposed solution should have **ICSA OR** webcoast checkmark certification for Antivirus/Anti Spyware.			
	The proposed solution must work as SMTP proxy not as MTA or relay server.			
	The proposed solution should support scanning for SMTP, POP3, IMAP, FTP, HTTP, FTP over HTTP protocols.			
	The basic virus signature database of proposed solution should comprise complete wild list signatures and variants as well as malware like Phising, spyware.			
	The proposed solution should have facility to add signature/disclaimer in mails.			
	The proposed solution must support on appliance quarantined facility			
	The proposed solution should support blocking of dynamic/executable files based on file extension.			
	For SMTP traffic, the proposed solution should support following actions Block, Notify, Bounce back for infected, suspicious or protected attachments mails.			
	The proposed solution should support multiple antivirus policy for sender/recipient email address or address group for notification setting, quarantine setting & file extension setting instead of single blanket policy			
	The proposed solution should update the signature database at a frequency of less than one hour & it should also support manual update.			

	For POP3 & IMAP traffic, the proposed system should strip the virus infected attachment & send notification to recipient & Admin.			
	The proposed solution should scan http traffic based on username, source/destination IP address or URL based regular expression.			
	The proposed solution should provide option to bypass scanning for specific HTTP traffic.			
	The proposed solution should support real mode & batch mode for HTTP virus scanning.			
	The proposed solution should provide historical reports based on username, IP address, Sender, Recipient & Virus Names.			
	Gateway Anti Spam			
	The proposed solution should have an integrated Anti Spam solution.			
	The proposed solution should have **ICSA OR** webcoast checkmark certification for Anti Spam.			
	The proposed solution should have configurable policy options to select what traffic to scan for spam.			
	The proposed solution should support spam scanning for SMTP, POP3, IMAP.			
	The proposed solution should support RBL database for spam detection.			
	The proposed solution must support mail archive option to keep copy of incoming & outgoing mails to administrator defined email address.			
	The proposed solution should have multiple configurable policy for email id/address group for quarantine setting, different actions instead of blanket policy.			
	The proposed solution must support on appliance quarantined facility			
	The proposed solution should support real time spam detection & also supports proactive virus detection technology which detects and blocks the new outbreaks immediately and accurately.			
	For SMTP traffic, the proposed solution support following actions Tag, Drop, Reject			
	The proposed solution should support IP/Email address white list/Black list facility.			
	The proposed solution should support option to enable/disable antispam scanning for SMTP authenticated traffic.			
	The proposed solution should support language independent spam detection functionality.			
	The proposed solution should block image based spam mails i.e. email message with text embedded in a image file.			
	The proposed solution should provide historical reports based on username, IP address, Sender, Recipient & spam category.			
	Proxy Solution Web content filtering			
	The proposed solution should be integrated solution with local **OR External** database instead of querying to database hosted somewhere on the internet.			
	The proposed solution must work as Standalone HTTP proxy.			
	The proposed solution must have 80+ web category with 40 Million URL database.			
	The proposed solution must have following features inbuilt			

	a. Should able to block HTTPS based URLs with the help of Certificates.			
	b. Should able to block URL based on regular expression			
	c. Should support exclusion list based on regular expression			
	d. Must have support to block any HTTP Upload traffic.			
	e. Should able to block Google cached websites on based of category.			
	f. Should able to block website hosted on Akamai.			
	g. Should able to identify & block requests coming from behind proxy server on the base of username & IP address.			
	h. Should able to identify & block URL translation request.			
	The proposed solution should support application control blocking features as follows			
	a. Should able to block known Chat application like Yahoo, MSN, AOL, Google, Rediff, Jabber etc			
	b. Should support blocking of File transfer on known Chat application and FTP protocol.			
	The proposed solution must block HTTP or HTTPS based anonymous proxy request available on the internet.			
	The proposed solution should provide option to customize Access denied message for each category.			
	The proposed solution should be CIPA compliant			
	The proposed solution should have specific categories that would reduce employee productivity, bandwidth choking sites and malicious websites.			
	The proposed solution should able to generate reports based on username, IP address, URL, groups, categories & category type.			
	The proposed solution should support search criteria in reports to find the relevant data.			
	The proposed solution should support creation of internet access time policy for individual users or on group basis.			
	The proposed solution should have integrated bandwidth management.			
	The proposed solution should able to set guaranteed and burstable bandwidth per User/IP/Application on individual or shared basis.			
	The proposed solution should provide option to set different level of priority for critical application.			
	The proposed solution should provide option to define different bandwidth for different schedule in a single policy & bandwidth should change as per schedule on the fly.			
	The proposed solution must provide logging and extensive controls on Instant Messaging (IM) traffic for Yahoo and MSN messengers			
	1. Log of chat sessions for all or specific set of users.			
	2. Rules to control allow or deny chat, voice, web cam and file transfer for specific ID or Group of IDs.			
	3. Achieve of transferred files.			
	4. Antivirus scanning on file transferred.			
	VPN			
	The proposed solution should be **ICSA OR** webcoast checkmark certified.			

	The proposed solution should support IPSec (Net-to-Net, Host-to-Host, Client-to-site), L2tp & PPTP VPN connection.			
	The proposed solution should support DES, 3DES, AES, Twofish, Blowfish, Serpent encryption algorithm.			
	The proposed solution should support Preshared keys & Digital certificate based authentication.			
	The proposed solution should support Main mode & Aggressive mode for phase 1 negotiation.			
	The proposed solution should support external certificate authorities.			
	The proposed solution should support export facility of Client-to-site configuration for hassle free VPN configuration in remote Laptop/Desktop.			
	The proposed solution should support commonly available IPSec VPN clients.			
	The proposed solution should support local certificate authority & should support create/renew/Delete self signed certificate.			
	The proposed solution should support VPN failover for redundancy purpose where more than one connection are in group & if one connection goes down it automatically switch over to another connection for zero downtime.			
	The proposed solution should have preloaded third party certicate authority including risign/Entrust.net/Microsoft and provide facility to upload any other certificate authority.			
	The proposed solution should support Threat free Ipsec/L2TP/PPTP VPN tunnel.			
	The proposed solution must provide on appliance SSL-VPN solution with Web Access (Clientless), Full Tunnel and Split Tunnel control. Solution should provide per user / group SSL-VPN access (Must be free license for unlimited users)			
	SSL-VPN solution should be certified by **ICSA OR** VPNC for SSL Portal / FireFox Compatibility / Java Script / Basic and Advanced Network Extensions.			
	Logging & Reporting			
	The proposed solution must have reporting solution.			
	The proposed solution should support minimum 100+ drill down reports.			
	The proposed solution should provide reports in HTML, CSV, PDF, Excel & graphical format.			
	The proposed solution should support logging of Antivirus, Antispam, content filtering, Traffic discovery, IPS, Firewall activity on syslog server.			
	The proposed solution should provides detailed reports for all files uploaded via HTTP or HTTPS protocol. The report should include username/IP address/URL/File name/Date and Time.			
	The proposed solution should provide data transfer reports on the based of application, username, Ip address.			
	The proposed solution should provide connection wise reports for user, source IP, destination IP, source port, destination port or protocol.			
	The proposed solution should have facility to send reports on mail address or on FTP server.			

	The proposed system solution provides approximate 45 regulatory compliance reports for SOX, HIPPA, PCI, FISMA and GLBA compliance.			
	The proposed solution should support Auditing facility to track all activity carried out Security appliance.			
	The proposed solution should support multiple syslog server for remote logging.			
	The proposed solution should forward logging information of all modules to syslog servers.			
	The proposed solution should have configurable option for email alerts/automated Report scheduling.			
	The proposed solution should be able to provide detailed reports about all mails passing through the firewall.			
	The proposed solution should provide reports for all blocked attempts done by users/IP address.			
	The proposed solution must be capable to derive logs and reports of proprietary devices including UTMs, Proxy Firewalls, Custom Applications and Syslog-compatible devices.			
	The proposed solution must be capable to provide Multiple Dashboard Report along with custom to customize the dashboards.			
	The proposed inbuilt reporting solution should be capable to do the forensic analysis to help organizations reconstruct the sequence of events that occurred at the time of security breach through iView logs and reports.			
Item No. 3.1 – 3 KVA On-line UPS for Central Network				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation /Remarks (If any)**
3.1	**General:**	11		
	3 KVA Online UPS (with 1 hour battery backup)			
	Online UPS with PWM Technology suitable for single Phase AC input voltage			
	UPS shall be housed in rugged enclosure made of M.S. Sheet 1.2 mm (minimum) thick, aesthetically finished, duly pre-treated and powder coated.			
	UPS shall be free from workmanship defects, sharp edges, nicks, scratches, burs etc. All fasteners shall be fixed properly. The equipment shall be complete with all parts and all parts shall be functional			
	Enclosures shall conform to protection requirement of IP2L1 to ISI:3947 (Part 1)/1993 (reaffirmed 1998)			
	Bypass Switch			
	Manual and Static by-pass switch shall be provided for maintenance of UPS			
	UPS shall supply output power and charging current at the same time			
	Switching Device			
	Switching Device shall be IGBT			
	Switching frequency shall be 19 KHz or above			
	UPS shall be provided with serial communication port RS 232 for computer interface for data exchange of electrical parameters of UPS like voltage, current, frequency, charging status, mode of operation etc.			

	Rating			
	The rating specified is a unity power factor			
	INPUT			
	Voltage Range: 160V - 260V			
	Frequency Range: 50Hz +/- 10% Hz			
	Phase: Single Phase AC			
	OUTPUT			
	Voltage Regulation: 230 V +/-2Percent (with alternative setting for 220V +/- 2Percent)			
	Output Frequency: 50 Hz +/- 1 Hz Single Phase (In inverter mode)			
	Voltage Regulation: From on load to full load Should be within +/- 1Percent in both the cases, UPS shall also have facility for operation in synchronous mode in which output frequency shall be same as that of mains frequency			
	Harmonic Distortion: 2% maximum on resistive load for 3 KVA			
	Efficiency			
	At rated Output voltage and Frequency Inverter: 90% (min.)			
	Overall: 85% (min.)			
	Power Factor			
	Load power Factor: Better than 0.65 lagging			
	UPS power factor: Better than 0.9 lagging			
	Over load:			
	UPS shall withstand 20% overload for 5 minutes and 50% overload for 1 minute			
	ENVIROMENT			
	Noise Level - less than 55 db at a distance of 1 meter			
	Protection			
	Over voltage, short circuit and overload at UPS output terminal, Under voltage at battery terminal, Overshoot and undershoot shall not be greater than 4% of rated voltage for duration of 60 msec			
	Indicators Digital meters			
	Mains Presence, Battery Charging and Discharging, Low battery voltage			
	Input AC Voltage, Output AC Voltage, I/o Frequency, & O/p Frequency, Battery Voltage (with LED\LCD display)			
	Battery Detail			
	4800 VAH for 3 KVA - 60 min			
	Battery Type: Sealed Maintenance Free (VRLA)			
	Battery Make: Exide/Quanta/CSB/Panasonic/ ROCKET/Same make as OEM (Battery Sr. No. on OEM Letter Head with Warranty Assurance of 1 year)			

	Battery Housing: A suitable battery cabinet matching the UPS enclosures			
Item No. 3.2 – 600 VA Line Interactive UPS				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation /Remarks (If any)**
3.2	**General:**	151		
	Single Phase Input & Single Phase Output			
	Line Interactive UPS with AVR & PWM Technology for computers suitable for single Phase AC input voltage			
	UPS shall be housed in rugged enclosure made of M.S. Sheet 1.2 mm (minimum) thick, aesthetically finished, duly pre-treated and powder coated or ABS body.			
	UPS shall be free from workmanship defects, sharp edges, nicks, scratches, burs etc. All fasteners shall be fixed properly. The equipment shall be complete with all parts and all parts shall be functional			
	Switching Device:			
	Switching Device shall be MOSFET or IGBT			
	Switching frequency shall be above 50 Hz			
	Transfer time- Switching over time from AC mains to UPS mode on power failure shall be Max. 10 milliseconds			
	Input- 160 V – 280 V, 50 Hz +/- 3 Hz , single phase AC			
	Output			
	AC Mode- AVR Output voltage in AC mode; 180-255 V ; 50 Hz +/- 3 Hz			
	Battery Mode- UPS Output voltage in battery mode; 230 V +/- 10%, 50 Hz +/- 3 Hz load power factor of not less than 0.6 lagging			
	Overload- UPS shall withstand 5% overload			
	Protections			
	If input voltage goes outside the range 160V-280V, the system shall switch over to UPS mode			
	Over Voltage, short circuit and overload at UPS output terminal, no load shut down. Cold start			
	Under voltage at battery terminal, Battery over charge			
	Indicators and meters			
	Mains presence, UPS mode, Battery low, overload			
	Battery details			
	Battery Type- Sealed Maintenance Free (VRLA) Built-in			
	Battery make- Exide/Quanta/CSB/Panasonic /Yuasa/Same make as OEM (Battery Sr. No on OEM Letter Head with Warranty Assurance of 1 years)			
	Minimum Battery AH- 600 VA UPS – 84 VAH – 15 minutes Battery Back Up			
Item No. 4 – Data Servers				

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation /Remarks (If any)
4	Tower Cabinet	3		
	2 * Quad Core Intel Xeon E5-2407 Processor 2.2 GHz, 10 MB, 6.4 GT/s QPI Link Speed or higher			
	Intel C602 Series chipset or better on Intel or equivalent OEM motherboard			
	4GB DDR3 800 MHz Registered (RDIMM) memory upgradeable upto 192GB or more			
	3*600 GB Hot Swappable SAS Hard Disk drive @ 10 k rpm			
	Up 8 x 3.5" SATA or SAS HDDs Up to 16 x 2.5" SATA or SAS HDDs			
	LTO-5 Ultrium tape drive with 5 nos of Media with required connectors (as per Capacity of storage required)			
	Integrated SAS RAID Controller with 512 MB cache (4 x 6 Gb/s) with RAID 0, 1, 5, 10 support			
	Dual Gigabit Ethernet Card			
	Integrated Systems Management Processor OR Integrated BMC Controller			
	Hot Swappable Power Supply, Fans and Hard Disk Drive			
	On Bard Graphics on 16 MB video Memory			
	4 USB Ports, keyboard and Mouse Port, 1 Serial Port,			
	Internal DVD Writer 16 X Drive			
	Redundant Power Supplies (Min 720 W 80 PLUS Gold)			
	Power on Password (or Set Up Password) / Administrator Password / Unattended boot / Selectable boot sequence			
	System Management to provide Monitoring health for Power Supply, Hard Disk, Memory,			
	Pre failure alert on CPU, HDD and RAM			
	Should be certified for Microsoft Windows, Red Hat Linux			
	Windows Server 2008 Standard Preloaded with 25 Client License, Educational Edition, Academic Edition			
	Microsoft Exchange Server 2008 Standard Academic Edition or higher			
	OEM Standard Keyboard			
	OEM Standard Mouse			
	18.5" or higher wide screen LCD Monitor, dynamic contrast Ratio-10000:1 or better; Response Time 5 ms or better; Resolution 1366*768 or better, **LCD Monitor Should be certified for TCO Displays 5.0**			
	Total PCI Slots : 5 - PCI / PCI X / PCI e Slots			
Other Items				
Item No. 5. 1– Wireless Access Controller				

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation /Remarks (If any)
5.1	**Port Configuration:**	23		
	Minimum 4 # 10/100/1000T ports, RJ-45 console port			
	Network Protocols:			
	TCP/IP			
	Standards:			
	IEEE802.3, IEEE 802.3u 10/100Base-Tx RJ-45, IEEE 802.3z 1000BaseX, IEEE 802.1d Spanning Tree, IEEE 802.1p Quality of Service, IEEE 802.1q VLAN, IEEE 802.1x Authentication, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11a, IEEE 802.11h, IEEE 802.11i Security, IEEE 802.11e Quality of Service for Wireless			
	IPv4 Unicast and Multicast Features			
	Static route, RIPv1/v2 (Optional), OSPF (Optional), IGMP snooping			
	IPv6 Features			
	TCPv6, UDPv6, ICMPv6, Pingv6, TraceRTv6, Telnetv6, DNSv6, IPv6 ACL, IPv6 static route			
	DHCP features:			
	DHCP Server, DHCP Client, DHCP Relay			
	Others:			
	DNS Client, NTP (Server and Client)			
	Security Features:			
	WEP (WEP64/WEP128), WPA-PSK, WPA2-PSK, WPA, WPA2, 802.1X authentication, DoS attack control, Access control list, MAC-based Access control List, IP filtering			
	Access point Management			
	Wireless mode (802.11b/g/n), Seamless roaming, Manual or Auto Channel selection, Centralized Management of Access points and Wireless clients, Access point discovery with Static IP discovering, DHCP discovering, DNS discovering,			
	Support up to 32 Access points Scalable and Upgradable up to 200 Access points without adding additional Controller or hardware			
	Configure, maintain and management of Access points and clients			
	Auto update of Software, Auto configuration and SNMP management for the access points			
	WMM – Wireless multimedia Extension			
	Management and Configuration:			
	SNMP v1/v2/v3 Management Protocols, Web based Management, Console based Configuration, Syslog, User access via Telnet and SSH login, NTP			
	Environment			
	Operating Temperature of 0 deg. C to 45 deg. C			
	Storage Temperature of - 25 deg. C to 60 deg. C			
	Operating Humidity of 5% - 90 %			
Item No. 5.2 – Wireless Access Point (In Door Access Point)				

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
5.2	**Hardware specifications**	660		
	1 # 10/100/1000T Ethernet Port			
	IEEE 802.11n, min 2 x 2 MIMO, 2 spatial streams Must support simultaneous 802.11n on both the 2.4 GHz and 5 GHz radios and Must support data rates up to 300Mbps on 5Ghz radio and 144mbps on 2.4Ghz radio.			
	3 # SMA connectors for connecting up to 5dbi Antenna or Integrated Fit -in Antenna			
	Standards:			
	IEEE 802.11n, Backward compatible with IEEE 802.11b/g			
	Frequency Range:			
	802.11a/n : 5.725 GHz to 5.825 GHz or More up to 5.850Ghz 802.11b/g/n : 2.4 GHz to 2.472 GHz or More up to 2.483Ghz			
	Transmit Power:			
	100mW (20dBm)			
	Software Features:			
	VLAN as per IEEE 802.1Q			
	Quality of service as per IEEE 802.11e WMM			
	Minimum four level of priority queues, Traffic classifications, Traffic Limitations			
	Multicasting support with IGMP snooping			
	Rate limiting / Bandwidth Limitation			
	Load balancing based on AP user traffic			
	Seamless roaming support			
	Minimum 16 Virtual Access point channels			
	SSID hiding function			
	Access point switch over function			
	IPv6 ready			
	Security Features:			
	IEEE 802.1x Authentication			
	MAC address Authentication			
	MAC filtering			
	Access control list			
	WEP (WEP64, WEP128) encryption, WPA, 802.11i)			
	Power supply:			
	External power adapter			
	Input power of Input: 110-240V AC and Output power of 12V DC, 1.5A			
	Power consumption up to 15 watts			
	Must support up to 20dbm of Transmit power in both 2.4Ghz and 5Ghz			
	Management Features:			

	SNMP protocol, Telnet, SSH, HTTP / HTTPS, Local and Remote maintenance, Syslog, Alarm function			
	Environment:			
	Operating Temperature: 0 deg. C - 45 deg. C			
	Operating Humidity 5% - 95% non-condensing			
	WPC / ETA certificate is required for access point			

Item No. 5.3 – Wireless PCI Card

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
5.3	Transmission of Speed 54 Mbps	380		
	802.11n standards			
	PCI 2.2			
	Works on 2.4 GHz Frequency band			
	Strong 64/128 bit WEP data encryption security			
	Compatible with 802.11b/g/n products			
	Advance security with WPA, 802.1x authentication, TKIP support			
	Powerful antenna provides 100 m indoors 300m outdoor operation range			
	External dipole antenna with detachable reverse SMA connector			

Item 5.4 – 4 Port PoE Injector

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
5.4	**4 Port Injector (15W Per Port)**	184		
	Technical Specification:			
	LED indicators			
	Number of ports: Four non-POE ports to connect to controller / switch, four POE 802.3af ports			
	Data rates: 10/100MBps			
	Plug & Play Installation			
	Full Power 60W – 15W Per Port			
	Environmental conditions:			
	Operating ambient temperature: 0 to 40 degrees Celsius			
	Operating Humidity 5% ~90%			
	PoE injector and Wireless access point should be of same make			

Note: Bidder may quote 184 numbers of 4 Port OR 368 numbers of 2 Port OR 736 numbers of 1 Port POE injector and quote the price accordingly in financial bid

Tools

Item No. 6.1 – Impacting Tool				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
6.1	Impacting Tool to Punch the Cat6 wire in patch panel and keystone jack with wire Removal tags	3		

Item No. 6.2 – Crimping Tool				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
6.2	Crimping Tool to crimp the RJ45 Connectors with cat 6 wires	3		
	Should be able to crimp RJ11 Connectors as well with wire cutter and stripper.			

Item No. 6.3 – Cable Tester				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
6.3	**Battery Life:**	3		
	Typical Standby: 2.5 years			
	Cable Testing: 20 hours			
	Cable Types:			
	Shielded or Unshielded, Cat 6, Cat 5e, Cat 5, Cat 4, or Cat 3			
	Minimum Cable Length for Testing for Split Pairs:			
	1 meter (3 feet)			
	Maximum Cable Length for Testing:			
	305 meters (1000 feet)			
	Coax Cable:			
	100 ohms maximum DC resistance, center conductor plus shield			
	Indicators:			
	LEDs for power, low battery and Cable wires.			

Racks				
Item No. 7.1 - 42 U Rack				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
7.1	Front doors of Toughened tinted glass	6		
	Top cover with provision for fan try mounting			
	Rear steel doors - with venting options			
	Stationary and sliding shelves			
	Front Section with glass door and lock			
	Maximum load rating of 350 kgs			

	600mm wide x 1000mm deep			
	Side panel with slam latches			
	Steel door and glass door trims powder coated			
	Bottom cover with gland plate kit 1U Fan try, 4 fan position with 4 cooling fans,			
	Two Vertical AC power Distribution boxes on back side			
	AC Main channels			
	Front and rear mounting angles			
	Earth continuity kit			
	With 8 cable managers			
	With 5 cantilever shelves			
	Keyboard tray sliding with mouse pad			
	Caster with foot-operated brake			

Item No. 7.2 - 24 U Rack

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
7.2	Rigid frame that can be fixed to the wall or the rack should be floor standing.	19		
	Adjustable rails in the front and rear			
	Top and Bottom cable entry facility			
	Front Section with glass door and lock			
	600mm wide x 500mm deep or more			
	Steel cabinet powder coated light grey			
	Steel door and glass door trims powder coated			
	1U Fan try, 2 fan position, cooling fans,			
	AC power Distribution box equipped with fuse and 2 x Five 5A Socket			
	Front Panel mounting hardware			
	Earth continuity kit			
	With 5 cable manager			
	With 3 Cantilever shelves			

Item No. 7.3 – 12 U Rack

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
7.3	Rigid frame that can be fixed to the wall	89		
	Adjustable rails in the front and rear			
	Top and Bottom cable entry facility			
	Front Section with glass door and lock			
	600mm wide x 500mm deep			
	Steel cabinet powder coated light grey			

	Steel door and glass door trims powder coated			
	1U Fan try, 2 fan position, cooling fans,			
	AC power Distribution box equipped with fuse and 2 x Five 5A Socket			
	Front Panel mounting hardware			
	Earth continuity kit			
	With 5 cable manager			
	With 3 Cantilever shelves			
Item No. 7.4- 9 U Rack				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
7.4	Rigid frame that can be fixed to the wall	42		
	Adjustable rails in the front and rear			
	Top and Bottom cable entry facility			
	Front Section with glass door and lock			
	Two Section Rack with back frame wall mount and hinged with front Section, to facilitate arranging/managing the cables from back side as well.			
	600mm wide x 500mm deep			
	Steel cabinet powder coated light grey			
	Steel door and glass door trims powder coated			
	1U Fan try, 2 fan position, cooling fans,			
	AC power Distribution box equipped with fuse and Five 5A Socket			
	Front Panel mounting hardware			
	Earth continuity kit With cable manager			
UTP Components				
Item No. 8.1 - Cat-6 UTP 4Pr UTP CMR Cable - 305 Meters Box				
Sr. No.	**Item**	**Qty.**	**Matched/ Not Matched**	**Deviation/ Remarks (If any)**
8.1	**General Specification:**	983		
	Standard Length : 305 Meters (1000 Feet)			
	4 Pair Twisted Cable			
	Tangle free cable pack in laminated corrugated box			
	Support for Fast and Gigabit Ethernet, IEEE 802.3/5/12, Voice, ISDN, ATM 155 and 622 Mbps.			
	Physical Specification :			
	Conductor : 23 AWG Annealed bare solid copper			
	Insulation : High Density Polyethylene			
	Core Color : Pair 1 : White - Blue			
	Pair 2 : White - Orange			
	Pair 3 : White - Green			

	Pair 4 : White - Brown			
	Sheath : Fire Retardant PVC Compound (FRPVC)			
	Approx. Cable OD : 6.5 mm			
	Operating Environment : Indoor			
	Electrical Specification : (at 550 MHz)			
	Standards : TIA / EIA 568 B.2-1			
	Impedance : 100 +/- 15 ohm			
	UL listed & ETL verified			

Item No. 8.2 - Cat-6 UTP 4Pr. Patch Cord - 1 Meter

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
8.2	Should conform or exceed the EIA/TIA 568 B standards for CAT 6 Factory molded boots on RJ 45 plugs at both ends	6240		
	Compliance with Cat 6 standards of ISO/IEC 11801, EIA/TIA 568, EN50173 and UL, ETL			
	Length - 3 feet/1m			

Item No. 8.3 - Cat-6 UTP 4Pr. Patch Cord - 2 Meter

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
8.3	Should conform or exceed the EIA/TIA 568 B standards for CAT 6 Factory molded boots on RJ 45 plugs at both ends	6240		
	Compliance with Cat 6 standards of ISO/IEC 11801, EIA/TIA 568, EN50173 and UL, ETL			
	Length – 7 feet/2m			

Item No. 8.4 - Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
8.4	Angular Face plates with shutters	6240		
	Screw cap design for better looking fronts			
	Suitable for use with all RJ45 installations including CAT 5, CAT 5e and CAT6			
	RJ-45 sockets With Blanking spacer if required.			
	Single Gang			
	Molded PVC-U			
	Tough shatter resistant PVC			

	Designed for ease of use			
	Square in Size			
	Designed for ease of use			
	Uncluttered internal design			
	PCB based Cat 6 Keystone Jack			
	Spring Contact: 50u" gold over 100u" nickel			
	Should Support T568A/T568B wiring Standards			

Item No. 8.5 - Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with Cable Manager

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
8.5	Port Patch Panel With Rack Mount	328		
	RJ45 female ports on front - 110 type wire termination blocks on back.			
	Rack mountable			
	Compatible with 23 - 24 AWG solid Conductor UTP cable.			
	Should conform or exceed the EIA/TIA 568 B.2-1 standards for CAT6			
	Fully Compatible with Gigabit Ethernet.			
	Metallic high strength and 1RU height, Should have routing rings, ties, labeling strips for identification			
	Should have protection on each port to protect from dust ingress and such particles by having shutter or cap.			

Item no. 8.6 to 8.7- Other Components

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
8.6	1.5" Size PVC Cap on Casing with Accessories needs to be installed where ever required. (As per Actual Qty required at Site)	65338		
8.7	1.5" Size PVC Pipe with Accessories needs to be installed where ever required. (As per Actual Qty required at Site)	106333		

Fiber Components

Item No. 9.1 – Single Mode Fiber Cable

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.1	6 core Fiber Cables to be supplied	16625		
	Single Mode Fiber to support 1310 nm and 1550 nm wavelengths, 9/125 micron,			
	Graded index, anti rodent, fiber Should be protected inside jelly filled loose tube armoring with acrylic coated good quality steel.			

	Should conform or exceed the EIA/TIA 455, EIA/TIA 568, ISO-11801 and ICEA-640 standards for Fiber and cable performance specifications.			
	Attenuation : Not more than 0.38 dB/km at 1310 nm and 0.25 dB/km at 1550 nm			
	ECCS armor followed by a jacket of polyethylene. Over the armor, water blocking powder applied for water tight cable.			
	Aramid yarn as peripheral strength member, Steel rods embedded in the outer jacket.			

Item No. 9.2 – Fiber SM-SC Couplers and Pigtail x

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.2	2.5mm Zirconia Ferrule with 1 Meter length	984		
	Single Mode			
	Push pull mechanism			
	0.9mm Tight buffered fiber			
	Insertion Loss : 9/125 um 0.2 dB SM			

Item No. 9.3 – Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.3	SM SC / LC Fiber Patch Cord, 3M, Duplex, 9/125um	154		

Item No. 9.4 – 12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.4	Mode availability 12 Port Fiber Patch Panel	66		
	Rack mount with 1RU height			
	Made of powder coated steel.			
	Have slots on front panel to accommodate SC adapters			
	Should have two connector panels, each with 3 SM-SC adaptors - Loaded			
	Should have fiber management provision inside			
	Should have earthling lugs, splicing tray with sleeves, two set of moon cable routing and other accessories.			
	Panel cover Should be slide out for easy maintenance			
	Fiber SC Adaptors To be fitted in the Supplied LIU with Accessories			

Item No. 9.5 – 24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.5	Mode availability 24 Port Fiber Patch Panel	8		
	Rack mount with 1RU height			

	Made of powder coated steel.			
	Have slots on front panel to accommodate SC adapters			
	Should have two connector panels, each with 6 SM-SC adaptors - Loaded			
	Should have fiber management provision inside			
	Should have splicing tray, two set of moon cable routing and other accessories.			
	Panel cover Should be slide out for easy maintenance			
	Fiber SC Adaptors To be fitted in the Supplied LIU with Accessories			

Item No. 9.6 to 9.8 - Other Components

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In mtrs.)	14000		
9.7	25mm Class B category ISI mark GI Pipe (As per Actual Qty Required at Site) (In mtrs.)	1130		
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	419		

Service as per Actual

Item No. 10.1 to 10.26 – Service as per Actual

Sr. No.	Item	Qty.	Matched/ Not Matched	Deviation/ Remarks (If any)
10.1	Laying of 6 Core Single Mode Fiber Cable	16625		
10.2	Laying of HDPE pipe	14000		
10.3	Laying of GI Pipe - 25mm	1130		
10.4	Fixing of LIUs	74		
10.5	Fiber Pigtails Splicing	984		
10.6	Fiber Core Testing Charges	984		
10.7	Soft Soil Digging & Refilling	11970		
10.8	Hard Soil / Rock digging & Refilling	1790		
10.9	Asphalt Cutting - RCC Cutting	1065		
10.10	Underground Boring	324		
10.11	Fixing of Route Marker	419		
10.12	Laying of PVC Conduits / cap on casing - 1.5"	171667		
10.13	Laying of UTP Cable	299815		
10.14	Feruling , Labeling	12480		
10.15	Termination of Information Outlet	6240		
10.16	Termination of 24 Port Jack Panel	328		
10.17	Rack Installation with Patch cord Routing	156		
10.18	UTP Cable testing with Scanner	6240		

10.19	Site Certification	38		
10.20	Installation of Layer 3 Switch	8		
10.21	Installation of Layer 2 Switch	308		
10.22	Installation of Gateway Security Appliance	3		
10.23	Installation of Wireless Access Controller	23		
10.24	Full Time Resident Engineer during Warranty Period	3		

Scope of Work

Bidders should quote for the Solution to the campus wide area network as per the scope of work described below:

1. Supply, Installation, Commissioning and Configuration of the Network Switches/ Routers etc. and associated equipment as per the solution.
2. Supply, Installation, Commissioning and Configuration of the cabling components' and associated equipment as per the solution.
3. Supply, Installation, Commissioning and Configuration of the Network Wireless Controller / Access Points and associated equipment as per the solution. Supply and Install Wireless Network Management system to manage the entire campus Infrastructure through Wireless controller.
4. Test connectivity end to end and commission the system; for proper connectivity as a part of QA/QC.
5. Test all redundancies and resiliencies as per the solution as a part of QA/ QC procedures and submit a detailed documentation of the system installed and commissioned.
6. Supply and Install of Wireless Management System in existing Campus Wide Area Network to manage entire campus infrastructure centrally.
7. Before installing Campus wide area Network and Wireless area Network a proper layout plan should be submitted to the expert and finalize with the institute taking in view Bill of Material of the institute.
8. The successful bidder will have to configure the Network Switch, Wireless Controller, Access Point / Routers, cabling components and associated equipment in existing Network.
9. Successful bidder should ensure that the quoted product must be seamlessly integrate with existing network.
10. Successful bidder is required to configure Internet Distribution (Internet facility) in all extended nodes with all services.
11. Services on Internet should be seamlessly available on entire CWAN network. Successful bidder is required to configure the quoted product & will require to coordinate with existing vendor(s) of CWAN if required.

Following considerations shall be kept in mind, to arrive at the campus architecture of the respective institutes.

High-availability:

It is required because of mission critical systems running on the campus network. If any active link going down for any reason should have preferably no impact or minimal impact on the network performance.

The network level redundancy should be automatic and' no manual intervention should be required for switchover of the links.

Modularity:

It is a key requirement in the sense that incremental additions should be possible at the hardware and software levels as evolving needs justify expansion.

Scalability and Expandability:

Scalability and Expandability are the stated requirements of the proposed campus network at respective institutes. The solution should be Scalable and Expandable, if required, should be easy with minimal changes in the network.

Flexibility:

Flexibility and ease of adding new services or features (Data, Voice, Video, Wireless etc.) required due to the dynamic operating environment.

The proposed solution should also be flexible enough to support current standards and foreseen upcoming standards.

QoS:

Qua1ity of Service is required in the proposed network as various user groups and various applications will be running on the network. All the network components being proposed should support traffic policies and QoS

Reliability:

High reliability of the entire product constituting the core of the campus network and other sub systems is crucial. The product should have the self healing with fast convergence future in case of any failure. The equipments proposed should have high MTBF and with prove reliability.

Redundancy:

Physical redundancy is required at fiber level. This should be achieved using redundant runs of fiber on redundant paths. If primary fiber gates cut or damaged for any reason, it should have preferably no impact or minimum impact on the overall operation system. Network level redundancy is required at the connectivity level.

Down times must be minimized by the right choice of components, right design and provision of adequate redundancy.

Security:

Security is one of the key requirements of proposed campus network as different user groups are using this common infrastructure with very sensitive applications. So provision of adequate security to be provided on the network between different user groups.

Management:

Complete visibility and control *of* the network, as well as the provision of being able *to* exchange data with the management platforms or other sub systems is crucial *to* the proposed campus network. The NMS should support features for centralized proactive management, statistical analysis, troubleshooting tools, configuration tools, etc.

Simplicity:

The proposed network design should be simple with minimum variety *of* components and from a single manufacture. This also implies simple *to* understand, implement and maintain the entire system.

The bidder should furnish a brief write up backed up with adequate data, explaining his available capacity and experience – both technical and commercial, for the installation and supply of the required systems and equipments within specified time of completion after meeting all their current commitments.

The successful bidder will have to carry out the site survey as per schematic network diagram annexed in bid document and submit the change (if any) in Network diagram, Schematic Diagram and Routing diagram and obtain the approval for the same from the College/Institute. The successful bidder will have to provide display board with all details of tags with all tag nodes, Network Diagram, Schematic Diagram and Routing Diagram.

Approved Manufacturers for Passive Networking components (Fiber and Copper with Accessories) are Systimex, Digilink, Molex, DAX, Tyco, D-Link, R&M and Plexonics.

Approved Manufacturers for Active Networking components are Cisco, Nortel, D-Link, DAX, 3COM, HP-N and Plexonics.

Approved Manufacturers for Wireless Networking components are Cisco, D-Link, DAX, Linksys, Netgear, HP-N, Aruba and Plexonics.

Approved Manufacturers for Racks are Vero President/DLINK/DAX/ APW/Valrack/Plexonics.

Approved Manufacturers for HDPE Pipes is of ISI make.

Approved Manufacturers for PVC Conduit and accessories/Casing and Capping are Modi, Precision, Presto Plast and Vraj.

Note: All sub category products should be of Single vendor e.g. L3 / L2 Switch and Wireless Products of same Make or Fiber, Copper and Accessories of same make.

Services

1. Installation and Termination, documentation and Site certification for Indoor/Outdoor Fiber Cabling.
2. Optic Cable laying with route survey and documentation with following:
   - 2.1 Outside building laying of fiber in HDPE/GI Pipe on wall or underground with proper clamping and Securing.
   - 2.2 SC connector termination on Fiber Optic cable.
   - 2.3 Supply and installation of buffer tubing kit.
   - 2.4 Cable pulling pit made of reinforced concrete and brick walls with removable covers, if required.
   - 2.5 Fiber optics cable route marker, if any.
   - 2.6 Performance testing of laid Fiber Optic cable for continuity, length and db loss as per FIA/TIA-455-60.
   - 2.7 Document for FO test procedures and Documentation of the results.
3. HDPE ducts 32mm OD for fiber Armored fiber pulling will be laid in ground 2.5 feet deep and 1 feet wide trench. Cable to be laid over 1 inch sand bed and covered soil over that where ever road crossing is there or cable is coming out of ground and outside building. This work will be divided in the flowing subdivisions. At the end there should be no fiber cable openly visible.
4. In-building laying of UTP CAT 6 cable with cable route survey and detailed cable route diagram, termination of cable with labels and marking as per approved labeling plan and documentation.
5. Supply and fixing of ISI marked PVC Conduit of sizes 1.5” size for UTP Cable. With secure enclosing of cable so that it will not be visible from and at any point. ‘T’s and ‘Bend’ required to be installed where ever required.
6. Installation and termination of UTP cables on Patch Panel with wire Manager and on Information outlet, crimping of RJ45 connector Performance testing of the laid UTP cable for Channel Link as per EIA/TIA TSB-67 standard or higher in particular wire map (Short, open, transpose, reverse, split), NEXT, PSNEXT, FEXT, PSFEXT, ACT, PSACR, Return loss, length, propagation delay, delay skew, Site certification for performance warranty of 20 years through OEM, Network Audit.
7. 20 Years warranty on parts and performance on installed networks for copper as well as fiber. Site registration requires with OEM for logical and passive network. This also includes following steps.
   - 7.1 The first step in certification is site registration.
   - 7.2 The network design, which includes logical active network and passive network, has to be approved. This procedure is initiated by filling up a registration form by the installer.
   - 7.3 A unique number is attached to this registration.
   - 7.4 The site has to be designed, installed and tested by Installers.
   - 7.5 The following documentations are required.
     - 7.5.1 Logical diagram,
     - 7.5.2 Routing diagram,
     - 7.5.3 Schematic Diagram
     - 7.5.4 Test Report for each point.
8. **Installation and configuration of Layer-3 Core Switches:** Active Components Installation charges for Layer-3 Switches along with Network Design and configuration of IP based network, Vlans planning and implementation, Inter VLAN routing and Layer-4 Access lists for LAN, Offloading and reconfiguring Router policies from Router to Core switches, Creating and testing for entire network redundancy on live network scenario and documentation of entire Active implementation per Institute.

9. **Installation and configuration of Layer-2 Core Switches**: Installation and configuration of Layer-2 Switches with Vlans creation and link redundancy implementation per Institute.
10. **Maintenance Service Engineer at Site for First Year of Contract:** Supplier will ensure the availability of One Full time (during Office hrs.) Service / Network Engineer on campus during all working days during first year of contract. He will be responsible for immediate repair and maintenance of any of network faults.

College wise Bill of Material for CWAN in 3 Colleges

Note: The Bill of Material and Quantity mentioned in Bid document are estimated as per the schematic Network Diagram annexed. The successful bidder will have to calculate and approve the changes, if any, in the actual Bill of Material from Institutes/Colleges/Board.

1. Govt. Polytechnic, Junagadh:

Sr. No	ITEM	UOM	Qty.
1.1	Layer 3 Switch	No.	1
1.2	24 Port Layer 2 Switch	No.	24
1.3	Mini GBIC 1000LX transceiver port	No.	20
1.4	RPS Power Supplies with Chassis for L3 Switches	No.	1
2	Gateway security Appliance	No.	1
3.1	3 KVA Online UPS for Central Network	No.	1
3.2	600 VA Line Interactive UPS	No.	10
4	Data Server	No.	1
5.1	Wireless Access Controller	No.	1
5.2	Wireless Access Point (Indoor Access Point)	No.	20
5.3	Wireless PCI Card	No.	60
5.4	4 Port PoE Injector	No.	8
6.1	Impacting Tool	No.	1
6.2	Crimping Tool	No.	1
6.3	Cable Tester	No.	1
7.1	42 U Rack	No.	1
7.2	24 U Rack	No.	3
7.3	12 U Rack	No.	5
7.4	9 U Rack	No.	2
8.1	Cat-6 UTP Cable - 305 Meters Box	BOX	90
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	No.	419
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	No.	419
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	No.	419
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	No.	24
8.6	1.5" Size PVC Cap on Casing with Accessories need to be installed where ever required.(As per Actual Qty req at Site)	Meter	5028
8.7	1.5" Size PVC Pipe with Accessories need to be installed where ever required. (As per Actual Qty Req at Site)	Meter	7961
9.1	Single Mode Fiber Cable	Meter	4000
9.2	Fiber SM-SC Couplers and Pigtail x	No.	192
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber	No.	20
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	12
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	2
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)	Meter	3500
9.7	25mm Class B category ISI mark GI Pipe (As per Actual Qty Required at Site) (In Mtr.)	Meter	200
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	No.	100

10.1	Laying of 6 Core Single Mode Fiber Cable	Meter	4000
10.2	Laying of HDPE pipe	Meter	3500
10.3	Laying of GI Pipe - 25mm	Meter	200
10.4	Fixing of LIUs	No.	14
10.5	Fiber Pigtails Splicing	No.	192
10.6	Fiber Core Testing Charges	No.	192
10.7	Soft Soil Digging & Refilling	Meter	3000
10.8	Hard Soil / Rock digging & Refilling	Meter	500
10.9	Asphalt Cutting - RCC Cutting	Meter	200
10.10	Underground Boring	Meter	50
10.11	Fixing of Route Marker	No.	100
10.12	Laying of PVC Conduits / cap on casing - 1.5"	Meter	12989
10.13	Laying of UTP Cable	Meter	27450
10.14	Feruling , Labeling	No.	838
10.15	Termination of Information Outlet	No.	419
10.16	Termination of 24 Port Jack Panel	No.	24
10.17	Rack Installation with Patch cord Routing	No.	11
10.18	UTP Cable testing with Scanner	No.	419
10.19	Site Certification	Job	1
10.20	Installation of Layer 3 Switch	No.	1
10.21	Installation of Layer 2 Switch	No.	24
10.22	Installation of Gateway Security Appliance	No.	1
10.23	Installation of Wireless Access Controller	Job	1
10.24	Full Time Resident Engineer during Warranty Period	No.	1

2. Government Engineering College, Palanpur:

Sr. No	ITEM	UOM	Qty.
1.1	Layer 3 Switch	No.	1
1.2	24 Port Layer 2 Switch	No.	32
1.3	Mini GBIC 1000LX transceiver port	No.	24
1.4	RPS Power Supplies with Chassis for L3 Switches	No.	1
2	Gateway security Appliance	No.	1
3.1	3 KVA Online UPS for Central Network	No.	1
3.2	600 VA Line Interactive UPS	No.	13
4	Data Server	No.	1
5.1	Wireless Access Controller	No.	1
5.2	Wireless Access Point (Indoor Access Point)	No.	20
5.3	Wireless PCI Card	No.	60
5.4	4 Port PoE Injector	No.	8
6.1	Impacting Tool	No.	1
6.2	Crimping Tool	No.	1
6.3	Cable Tester	No.	1
7.1	42 U Rack	No.	1
7.2	24 U Rack	No.	4

7.3	12 U Rack	No.	7
7.4	9 U Rack	No.	2
8.1	Cat-6 UTP Cable - 305 Meters Box	BOX	111
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	No.	638
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	No.	638
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	No.	638
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	No.	32
8.6	1.5" Size PVC Cap on Casing with Accessories need to be installed where ever required.(As per Actual Qty req at Site)	Meter	5028
8.7	1.5" Size PVC Pipe with Accessories need to be installed where ever required.(As per Actual Qty Req at Site)	Meter	7961
9.1	Single Mode Fiber Cable	Meter	3100
9.2	Fiber SM-SC Couplers and Pigtail x	No.	192
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber	No.	24
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	12
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	2
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)	Meter	2700
9.7	25mm Class B category ISI mark GI Pipe (As per Actual Qty Required at Site) (In Mtr.)	Meter	400
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	No.	100
10.1	Laying of 6 Core Single Mode Fiber Cable	Meter	3100
10.2	Laying of HDPE pipe	Meter	2700
10.3	Laying of GI Pipe - 25mm	Meter	400
10.4	Fixing of LIUs	No.	14
10.5	Fiber Pigtails Splicing	No.	192
10.6	Fiber Core Testing Charges	No.	192
10.7	Soft Soil Digging & Refilling	Meter	2400
10.8	Hard Soil / Rock digging & Refilling	Meter	300
10.9	Asphalt Cutting - RCC Cutting	Meter	300
10.10	Underground Boring	Meter	50
10.11	Fixing of Route Marker	No.	100
10.12	Laying of PVC Conduits / cap on casing - 1.5"	Meter	12989
10.13	Laying of UTP Cable	Meter	33855
10.14	Feruling , Labeling	No.	1276
10.15	Termination of Information Outlet	No.	638
10.16	Termination of 24 Port Jack Panel	No.	32
10.17	Rack Installation with Patch cord Routing	No.	14
10.18	UTP Cable testing with Scanner	No.	638
10.19	Site Certification	Job	1
10.20	Installation of Layer 3 Switch	No.	1
10.21	Installation of Layer 2 Switch	No.	32
10.22	Installation of Gateway Security Appliance	No.	1
10.23	Installation of Wireless Access Controller	Job	1
10.24	Full Time Resident Engineer during Warranty Period	No.	1

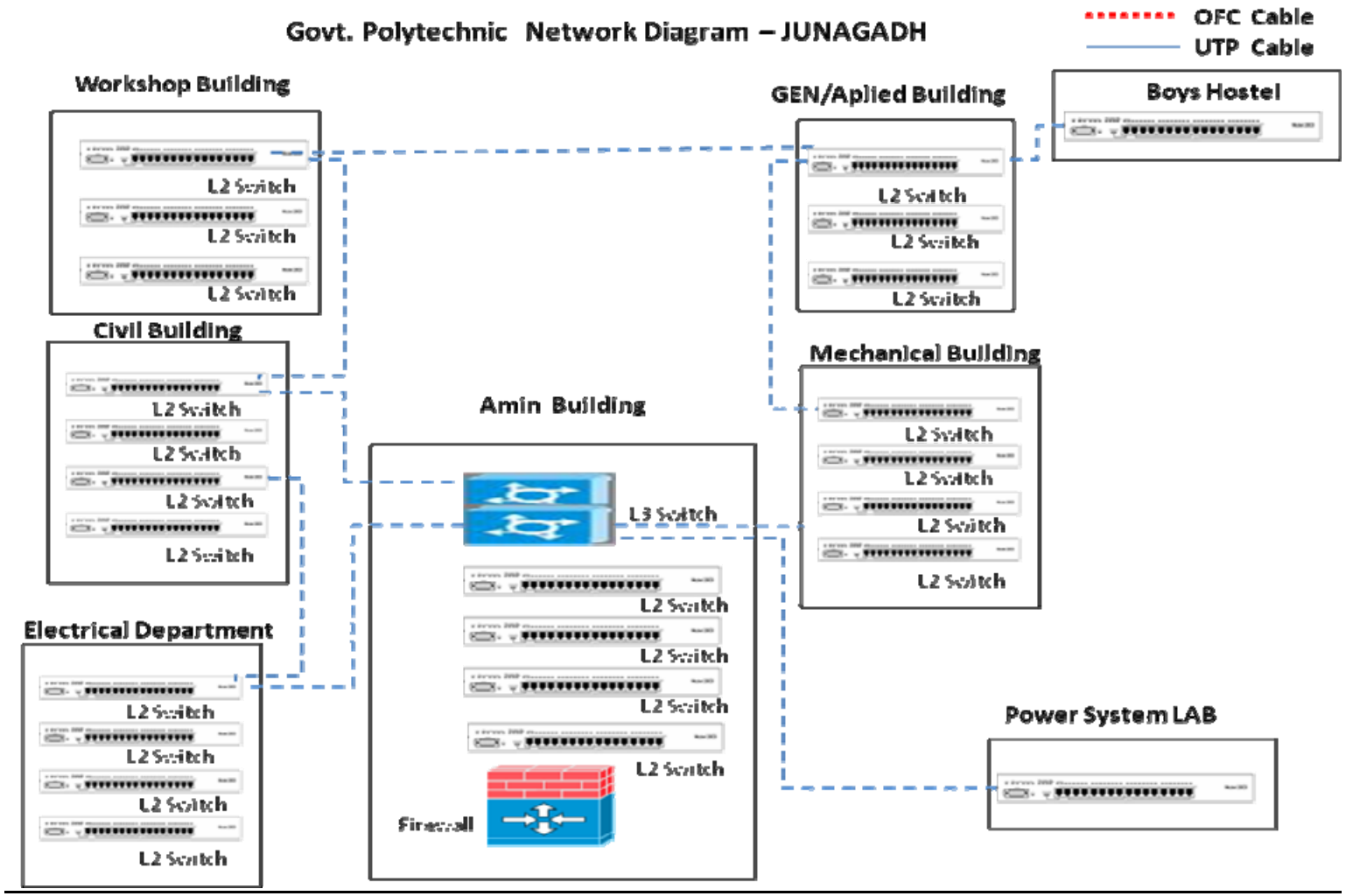
3. Govt. Engineering College, Godhra:

Sr. No	ITEM	UOM	Qty.
1.1	Layer 3 Switch	No.	1
1.2	24 Port Layer 2 Switch	No.	28
1.3	Mini GBIC 1000LXs transceiver port	No.	28
1.4	RPS Power Supplies with Chassis for L3 Switches	No.	1
2	Gateway security Appliance	No.	1
3.1	3 KVA Online UPS for Central Network	No.	1
3.2	600 VA Line Interactive UPS	No.	14
4	Data Server	No.	1
5.1	Wireless Access Controller	No.	1
5.2	Wireless Access Point (Indoor Access Point)	No.	20
5.3	Wireless PCI Card	No.	60
5.4	4 Port PoE Injector	No.	8
6.1	Impacting Tool	No.	1
6.2	Crimping Tool	No.	1
6.3	Cable Tester	No.	1
7.1	42 U Rack	No.	1
7.2	24 U Rack	No.	4
7.3	12 U Rack	No.	7
7.4	9 U Rack	No.	2
8.1	Cat-6 UTP Cable - 305 Meters Box	BOX	84
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	No.	558
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	No.	558
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	No.	558
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	No.	28
8.6	1.5" Size PVC Cap on Casing with Accessories need to be installed where ever required.(As per Actual Qty req at Site)	Meter	5028
8.7	1.5" Size PVC Pipe with Accessories need to be installed where ever required.(As per Actual Qty Req at Site)	Meter	7961
9.1	Single Mode Fiber Cable	Meter	4075
9.2	Fiber SM-SC Couplers and Pigtail x	No.	204
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber	No.	25
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	13
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	No.	2
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)	Meter	3500
9.7	25mm Class B category ISI mark GI Pipe (As per Actual Qty Required at Site) (In Mtr.)	Meter	200
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	No.	100
10.1	Laying of 6 Core Single Mode Fiber Cable	Meter	4075
10.2	Laying of HDPE pipe	Meter	3500
10.3	Laying of GI Pipe - 25mm	Meter	200

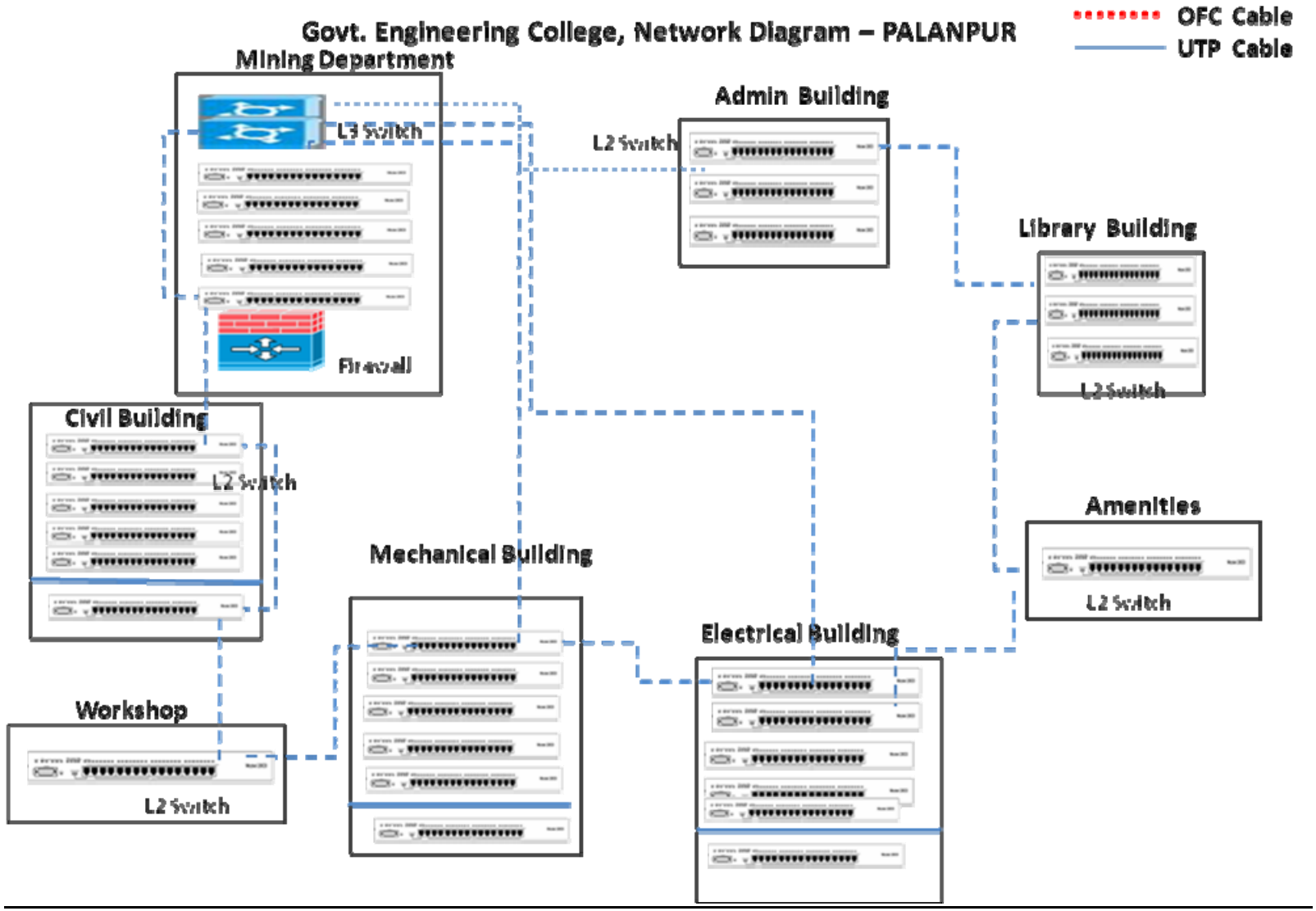
10.4	Fixing of LIUs	No.	15
10.5	Fiber Pigtails Splicing	No.	204
10.6	Fiber Core Testing Charges	No.	204
10.7	Soft Soil Digging & Refilling	Meter	3000
10.8	Hard Soil / Rock digging & Refilling	Meter	400
10.9	Asphalt Cutting - RCC Cutting	Meter	300
10.10	Underground Boring	Meter	50
10.11	Fixing of Route Marker	No.	100
10.12	Laying of PVC Conduits / cap on casing - 1.5"	Meter	12989
10.13	Laying of UTP Cable	Meter	25620
10.14	Feruling , Labeling	No.	1116
10.15	Termination of Information Outlet	No.	558
10.16	Termination of 24 Port Jack Panel	No.	28
10.17	Rack Installation with Patch cord Routing	No.	14
10.18	UTP Cable testing with Scanner	No.	558
10.19	Site Certification	Job	1
10.20	Installation of Layer 3 Switch	No.	1
10.21	Installation of Layer 2 Switch	No.	28
10.22	Installation of Gateway Security Appliance	No.	1
10.23	Installation of Wireless Access Controller	Job	1
10.24	Full Time Resident Engineer during Warranty Period	No.	1

Schematic Network Diagram for Directorate of Technical Education

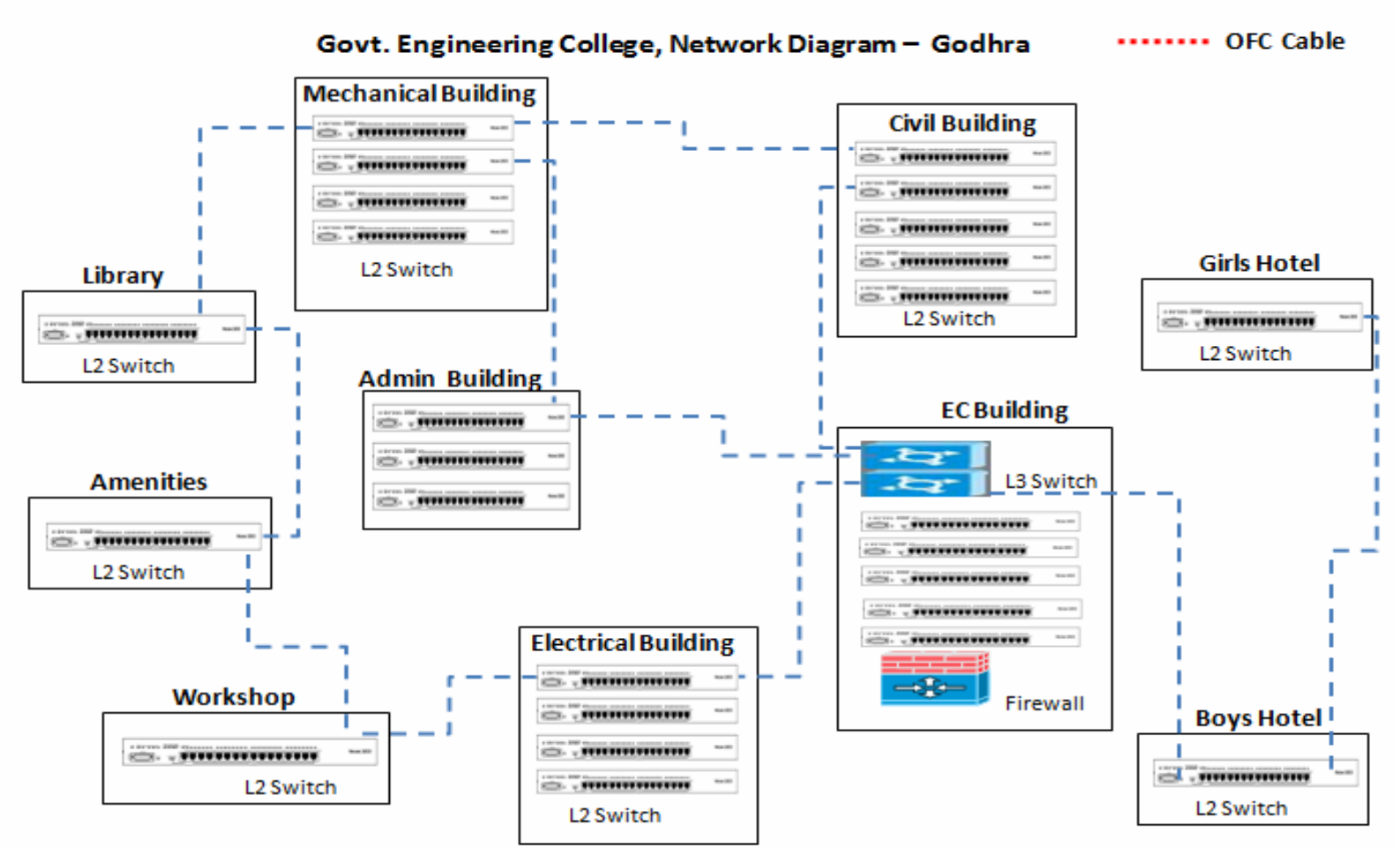
1. Govt. Polytechnic, Junagadh:



2. Government Engineering College, Palanpur:



3. Govt. Engineering College, Godhra:



College wise Bill of Material for Extension of existing CWAN nodes in 15 Colleges

Note: The Bill of Material and Quantity mentioned in Bid document are estimated as per the below table. The successful bidder will have to calculate and approve the changes, if any, in the actual Bill of Material from Institutes/Colleges/Board.

Sr. No	ITEM	UoM	GEC, G'Nagar (300)	LEC Morbi (430)	SSEC, Bhavnagar (300)	S&SS Gandhy, Surat (350)	GP Palanpur (25)	GP Rajkot (225)	RCTI A'Bad (135)	GP Valsad (200)	GP Godhara (10)	KDP Patan (90)	GEC Bharuch (300)	GEC Modasa (400)	GEC Chandkeda (180)	LDCE A'Bad (830)	GPG A'Bad (225)	TOTAL QTY
1.1	Layer 3 Switch	Nos.	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	5
1.2	24 Port Layer 2 Switch	Nos.	15	20	17	18	2	13	11	8	1	6	17	23	11	50	12	224
1.3	Mini GBIC 1000LX transceiver port	Nos.	0	6	0	10	0	2	0	2	0	0	9	6	16	32	2	85
1.4	RPS Power Supplies with Chassis for L3 Switches	Nos.	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	5
3.1	3 KVA Online UPS for Central Network	Nos.	1	0	1	1	0	0	0	0	0	0	1	1	1	1	1	8
3.2	600 VA Line Interactive UPS	Nos.	6	6	6	10	2	7	4	3	1	4	11	5	5	23	1	94
7.1	42 U Rack	Nos.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3
7.2	24 U Rack	Nos.	0	0	1	0	0	0	0	0	0	0	3	2		2	0	8
7.3	12 U Rack	Nos.	5	6	6	7	0	7	4	2	0	0	4	3	4	21	1	70
7.4	9 U Rack	Nos.	1	0	0	3	2	0	0	1	1	4	4	0		0	0	16
8.1	Cat-6 UTP Cable - 305 Meters Box	Box	55	40	35	28	5	40	33	38	2	16	49	67	26	140	44	618
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	Nos.	300	430	300	350	25	228	136	200	10	102	300	401	180	830	233	4025

8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	Nos.	300	430	300	350	25	228	136	200	10	102	300	401	180	830	233	4025
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	Nos.	300	430	300	350	25	228	136	200	10	102	300	401	180	830	233	4025
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	Nos.	15	20	17	18	2	13	11	8	1	6	17	23	11	50	12	224
8.6	1.5 Size PVC Cap on Casing with Accessories need to be installed where ever required. (As per Actual Qty req. at Site)	Meter	3000	4300	3000	3500	250	2280	1360	2000	100	1020	3000	4010	1800	8300	2330	40250
8.7	1.5 Size PVC Pipe with Accessories need to be installed where ever required. (As per Actual Qty Req at Site)	Meter	5400	7740	5400	6300	450	4104	2448	3600	180	1836	5400	7218	3240	14940	4194	72450
9.1	Single Mode Fiber Cable	Meter	0	600	0	700	0	200	0	200	0	0	350	2000	1150	0	250	5450
9.2	Fiber SM-SC Couplers and Pigtail x	Nos.	0	48	0	36	0	24	0	24	0	0	72	72	96	0	24	396
9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber	Nos.	0	6	0	10	0	2	0	2	0	0	9	6	16	32	2	85
9.4	12 port RM LIU - LIU Loaded with adapter plate and (with Single Mode Adapters)	Nos.	0	4	0	3	0	2	0	2	0	0	4	4	8	0	2	29
9.5	24 port RM LIU - LIU Loaded with adapter plate and (with Single Mode Adapters)	Nos.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2

9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)	Meter	0	500	0	300	0	150	0	150	0	0	300	1800	900	0	200	4300
9.7	25mm Class B category ISI marks GI Pipe (As per Actual Qty Required at Site) (In Mtr.)	Meter	0	50	0	50	0	15	0	15	0	0	50	100	50	0	0	330
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	Nos.	0	10	0	10	0	4	0	4	0	0	10	46	25	0	10	119
10.1	Laying of 6 Core Single Mode Fiber Cable	Meter	0	600	0	700	0	200	0	200	0	0	350	2000	1150	0	250	5450
10.2	Laying of HDPE pipe	Meter	0	500	0	300	0	150	0	150	0	0	300	1800	900	0	200	4300
10.3	Laying of GI Pipe - 25mm	Meter	0	50	0	50	0	15	0	15	0	0	50	100	50	0	0	330
10.4	Fixing of LIUs	Nos.	0	4	0	3	0	2	0	2	0	0	5	5	8	0	2	31
10.5	Fiber Pigtails Splicing	Core	0	48	0	36	0	24	0	24	0	0	72	72	96	0	24	396
10.6	Fiber Core Testing Charges	Core	0	48	0	36	0	24	0	24	0	0	72	72	96	0	24	396
10.7	Soft Soil Digging and Refilling	Meter	0	400	0	200	0	125	0	125	0	0	250	1400	900	0	170	3570
10.8	Hard Soil / Rock digging and Refilling	Meter	0	100	0	70	0	20	0	20	0	0	50	200	100	0	30	590
10.9	Asphalt Cutting - RCC Cutting	Meter	0	50	0	20	0	5	0	5	0	0	25	100	50	0	10	265
10.10	Underground Boring	Meter	0	50	0	10	0	2	0	2	0	0	25	50	25	0	10	174
10.11	Fixing of Route Marker	Meter	0	10	0	10	0	4	0	4	0	0	10	46	25	0	10	119
10.12	Laying of PVC Conduits / cap on casing - 1.5	Meter	8400	12040	8400	9800	700	6384	3808	5600	280	2856	8400	11228	5040	23240	6524	112700
10.13	Laying of UTP Cable	Meter	16775	12200	10675	8540	1525	12200	10065	11590	610	4880	14945	20435	7930	42700	13420	188490

10.14	Feruling , Labeling	Nos.	600	860	600	700	50	456	272	400	20	204	600	802	360	1660	466	8050
10.15	Termination of Information Outlet	Nos.	300	430	300	350	25	228	136	200	10	102	300	401	180	830	233	4025
10.16	Termination of 24 Port Jack Panel	Nos.	15	20	17	18	2	13	11	8	1	6	17	23	11	50	12	224
10.17	Rack Installation with Patch cord Routing	Nos.	6	6	7	10	2	7	4	3	1	4	11	5	5	24	2	97
10.18	UTP Cable testing with Scanner	Node	300	430	300	350	25	228	136	200	10	102	300	401	180	830	233	4025
10.19	Site Certification	Site	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
10.20	Installation of Layer 3 Switch	Nos.	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	5
10.21	Installation of Layer 2 Switch	Nos.	15	20	17	18	2	13	11	8	1	6	17	23	11	50	12	224

Bill of Material for Wireless Extension at 20 Government Institutes / Colleges across Gujarat State

Sr. No.	Item	UoM	Item Quantity	No. of Institutes/ Colleges	Total Quantity
3.2	600 VA Line Interactive UPS	Nos.	1	20	20
5.1	Wireless Access Controller	Nos.	1		20
5.2	Wireless Access Point (Indoor Access Point)	Nos.	30		600
5.3	Wireless PCI Card	Nos.	10		200
5.4	4 Port PoE Injector	Nos.	8		160
7.4	9 U Rack	Nos.	1		20
8.1	Cat-6 UTP Cable - 305 Meters Box	Box	4		80
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	Nos.	30		600
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	Nos.	30		600
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	Nos.	30		600
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	Nos.	1		20
8.6	1.5 Size PVC Cap on Casing with Accessories need to be installed where ever required. (As per Actual Qty req. at Site)	Meter	500		10000
8.7	1.5 Size PVC Pipe with Accessories need to be installed where ever required. (As per Actual Qty req. at Site)	Meter	500		10000
10.12	Laying of PVC Conduits / cap on casing - 1.5	Meter	1000		20000
10.13	Laying of UTP Cable	Meter	1220		24400
10.14	Feruling , Labeling	Nos.	60		1200
10.15	Termination of Information Outlet	Nos.	30		600
10.16	Termination of 24 Port Jack Panel	Nos.	1		20
10.17	Rack Installation with Patch cord Routing	Nos.	1		20
10.18	UTP Cable testing with Scanner	Node	30		600
10.19	Site Certification	Site	1		20
10.23	Installation of Wireless Access Controller	Nos.	1		20

Special Terms and Conditions

[A] Testing and Certification:

1. Inspection and Tests prior to shipment of Goods and at final acceptance are as follows:

1.1 The Inspection of the goods shall be carried out to check whether the goods are in conformity with the technical specifications attached to the contract.

1.2 Following broad test procedure will generally be followed for inspection and testing of machine.

1.3 The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report and manufacturer's warranty certificate. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation.

1.4 For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get works completed before receipt of the equipment.

1.5 Complete Hardware and software as specified should be supplied, installed and commissioned properly by the supplier prior to commencement of Performance testes.

1.6 The entire project of campus area networking will be completed within 120 working days from the date of award of contract.

2. The **acceptance Test** will be conducted by the purchaser / their consultant or any other person nominated by the purchaser, at its option. The acceptance will involve trouble free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests.

3. No malfunction, partial or complete failure of any part of hardware or excessive heating of motors attached to printers, drivers etc. or bugs in the software should occur. All the software should be complete and missing modules/sections will not be allowed. The supplier shall maintain necessary log in respect of the result s of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 98% for the duration of test period shall be considered as satisfactory.

4. In the event of the hardware software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

5. Inspection of the installation will be at the installation site and acceptance will be granted upon successful installation unless otherwise provided. Title to / or risk of loss or damage to all items shall be the responsibility of the bidder until acceptance by Purchase, unless loss or damage results due to negligence from purchaser. If the material or services supplied to purchaser are found to be defective or do not confirm to the specifications, Purchaser reserves the right to cancel the contract upon written notice to the bidder and return products at bidder's expense, based upon the terms of contract.

6. The bidder shall not declare any work as completed until Purchaser has inspected the work. If the bidder close up the work prior to inspection by Purchaser, the bidder shall uncover the work according to the specification contained herein.

7. The bidder shall notify Purchaser in written when the work is ready for inspection. The Purchaser will inspect the work as expeditiously as possible after receipt of notification from the bidder.

[B] Testing and Certification:

1. CAT -6 Cabling Testing:

1.1 100 percent of the horizontal and riser wiring pairs shall be tested for opens, shorts, polarity reversals and split pairs.

1.2 Horizontal wiring pairs shall be tested from the information outlet to the telecommunication closet.

1.3 The CAT -6 cabling systems shall be tested to certify conformance with the ANSI/ TIA/EIA-S68-A-S Commercial Building Cabling Standards.

1.4 Require test documentation to list not only pass/fail indications for each circuit tested, but also the actual measured values of all the test parameters.

1.5 Testing of CAT-6 cabling systems shall include the following parameters:

1.5.1 Length
1.5.2 Attenuation
1.5.3 Pair-to-Pair Near-End Cross Talk (NEXT)
1.5.4 Power Sum NEXT
1.5.5 Far-End Cross Talk (FEXT)
1.5.6 Pair-to-Pair Equal Level Far End Cross Talk (ELFEXT).
1.5.7 Power Sum ELFEXT
1.5.8 Attenuation to Cross Talk Ratio (ACR)
1.5.9 Power Sum ACR
1.5.10 Propagation delay and Delay Skew
1.5.11 Return Loss
1.5.12 All links must be characterized up to 100 MHz.

2. Optical Fiber Cabling Testing:

2.1 All fiber testing shall be performed on all fibers in the completed end-to-end system

2.2 There shall be no splices unless clearly defined. Testing shall consist of a bi- directional end to end by using either OTDR or Fiber Cable Tester.

2.3 The system loss measurement shall be provided at 850 and 1310 nanometers for single mode fibers.

2.4 Loss Budget: **The following formula should be used:** Fiber links shall have a maximum loss of (allowable cable loss per km) (km of fiber in link) + (04dB)(number of connectors) = maximum allowable loss.

2.5 A mated connector-to connector interface is defined as a single connector for the purpose of this contract.

2.6 The bidder, at no charge shall bring any link not meeting the requirements of the standard into compliance to Purchaser's requirements.

2.7 Structure cabling installer is responsible for getting the Structured Cabling Plant certified by the Structured-cabling vendor.

3. Manuals and Drawings:

3.1 Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals together with drawings of the goods and equipment. These shall be in such detail –as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.

3.2 The language of manuals and drawings shall be in English.

3.3 Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such –manuals and drawings have been supplied to the Purchaser.

4. **For the System and Other Software the following will apply:** The Supplier shall provide complete and legal documentation of hardware, all subsystems, operating systems, compiler, system software and the other software. The Supplier shall also provide licensed software for all software products, whether developed by them or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

5. Acceptance Certificates:

5.1 On successful completion of acceptability test, receipt of deliverables etc. and after the purchaser is satisfied with the working of the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

5.2 At least One Week's training shall be conducted on the dates mutually agreed upon and within two months from the date of acceptance of supply at the Purchaser's site.

6. **Delivery and Documents:**

6.1 Upon delivery of the Goods, the supplier shall notify the purchaser and the insurance company by cable/telex/fax the full details of the shipment including contract number, railway receipt number and date, description of goods, quantity, name of the consignee etc. The supplier shall mail, the following documents to the purchaser with a copy to the insurance company:

6.1.1 03 Copies of the Supplier invoice showing contract number, goods description, quantity, unit Price, total amount
6.1.2 Railway receipt/ acknowledgment of receipt of goods from the consignee(s);
6.1.3 03 Copies of packing list identifying the contents of each package
6.1.4 Insurance Certificate
6.1.5 Manufacturer's/Supplier's warranty certificate.
6.1.6 Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and
6.1.7 Certificate of Origin

6.2 The above documents shall be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses

7. **Insurance:** For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value.

8. **Incidental Services:**

8.1 The following. Services shall be furnished and the cost shall be included in the contract price:

8.2 Performance of the on-site assembly, commissioning and start-up of the equipment:

8.2.1 Installation, Configuration and Satisfactory Customization of the parameters of the Layer 3 Core stackable Switch excluding the costing for the configuration and customization of the layer 3 Module or the Policy Module (where applicable).

8.2.2 Installation, Configuration and Satisfactory Customization of the parameters of the Layer 3 Distribution Switch. The configuration shall be restricted to VLAN's configuration of Access Lists as necessary and implementing Policies where necessary. This includes the implementation of Virtual Router Redundancy Protocol on the Layer 3 Switches. The cost for installation, configuration and customization shall be quoted for as unit price per Layer 3 and / or Policy module (where applicable).

8.2.3 Installation, Configuration and Satisfactory Customization of the parameters of the parameters of the Layer 2 Edge Chassis based Switch.

8.2.4 Installation, Configuration and Satisfactory Customization of the parameters of the Firewall and other security products as per defined policies;

8.2.5 Installation of Network Management Software and associated modules;

8.3 Furnishing the detailed operation and maintenance manuals for each items of supply at each location.

8.4 Training of the Purchaser's personnel, minimum 3 (three), at the Purchaser's site or other facility, as mutually agreed upon by both bidder and purchaser, in the installation and operation of the computer hardware, utilities and all contracted software.

8.5 Maintenance and repair of the equipment at each location during the warranty period including 'supply of all spares. This shall not relieve- the supplier of any warranty obligations under this contract.

8.6 Maintenance and/or repairs of the supplied goods for a period of three years after the end of the warranty period. The bidder should indicate the spares and their costs, if any, which are not included in the maintenance contracts.

8.7 On-site assembly, commissioning of the network.

8.8 Furnishing the documents with following details after successful implementing the structured Cabling.

8.9 Configuration of Firewall and Internet connection distribution will have to be done by the bidder.

8.10 Domain Controller configuration is required to be done by the bidder.

8.11 All user ID creation, maintenance and upgradation will be done by the bidder.

8.12 System to be provided in both copy and soft copy in CD-ROM.

8.12.1 Detailed connectivity diagram;

8.12.2 Raceway / pathway diagram;

8.12.3 Cable routing diagram;

8.12.4 Copper and Fiber patching details;

8.12.5 Naming and labeling details;

8.12.6 Cable scanning and test results.

8.13 Training to faculty members' of the Purchaser for at least 3 to 5 days on the components of structured cabling, LAN, WAN, Security, basic trouble shooting and maintenance. (Shall provide all reference manuals, booklets and other materials required for training) at Purchaser's site. A minimum of 3 (Three) personnel to be trained. Training will be required only for the institutes where new CWAN and Wireless will be implemented. No training required at the institutes where node extension will be implemented.

8.14 Maintenance and repair of the structured cabling during the warranty period including supply of all spares. This shall not relieve the supplier of any warranty obligations under this contract.

9. **Spare Parts**: Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and spares. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order. Supplier shall ensure the availability of after sales service for a period of at least six years including the warranty period.

10. **Warranty:**

10.1 **In partial modification of the provisions, the warranty period shall be 5 years from date of acceptance of Goods.** The Supplier shall, in addition, comply with the performance and/ or

consumption guarantees specified under the contract. If for reasons attributable to the- Supplier, these guarantees are not attained in whole or in part, the Supplier Shall at its discretion either:

10.2 The bidder shall provide a Twenty-Year Product Performance Warranty for all the passive elements quoted.

10.3 In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period equivalent to the downtime.

10.4 The period for correction of defect in the warranty period is 3 (three) working days.

11. **Maintenance during warranty period:**

11.1 The Supplier will accomplish preventive and breakdown maintenance activities to ensure that all hardware execute without defect or interruption for **at least 98% uptime for 24 hours a day, 7 days a week of operation of the equipment.**

11.2 If any critical component of the entire configuration is out of service for more than three days, the Supplier shall either immediately replace the defective unit or replace it at its own cost.

11.3 The Supplier have to attend the site call and commence repair work of the equipment within **24 hours of being notified of equipment malfunction.**

11.4 The supplier shall guarantee a 98% uptime of the Network.

11.5 The **Warranty** should be comprehensive onsite warranty **with 5 years** and will cover the cost of all the spare parts required for replacement/repair the campus area wide LAN. The **Warranty** may be on regular basis to ensure the minimum downtime of the system. In other words **Warranty** should assure 98% uptime of the LAN.

12. **Maintenance service:** The maximum response time *for* maintenance complaint from any *of* the , destinations specified in the Schedule *of* Requirements (i.e. time required *for* supplier's maintenance engineer *to* report at the installation after a request call/telegram is made or letter is written) shall *not* exceed 24 hours.

13. **Site Preparation and Installation:** The Purchaser is solely responsible *for* the construction *of* the hardware sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date *to* allow the Supplier *to* perform a site inspection *to* verify the appropriateness *of* the sites before the installation of the hardware.

14. **Hardware Installation:** The Supplier will be responsible *for* all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting *to* power supplies. The Supplier will test all hardware operations and accomplish all adjustments necessary *for* successful and continuous operation *of* the hardware at all installation sites. The supplier has to submit Daily Report of material used to Institute/College for approval.

15. **Training:** For each hardware and 'software component installed, the Supplier is required *to* train the designated Purchaser's technical and end-user personnel *to* enable them to effectively operate the total system. The training schedule will be prepared as agreed *to* both parties during the performance *of* the Contract.

16. **Technical Documentation:** The Technical Documentation involving detailed instruction for operation and maintenance is to be delivered with every unit of the equipment supplied. The language of the documentation should be English. The successful bidder will have to provide display board with all details of tags with all tag nodes, Network Diagram, Schematic Diagram and Routing Diagram.

17. **Requirements at Site:** The bidder shall maintain the site as neat as possible and should *not* cause any nuisance at the site by any persons employed by him or cause any disturbance *to* any other contractor engaged in the work at the site. He shall remove all the materials and carry away the materials once the *work* has been completed.

18. **Supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:**

18.1 Quantity offered *for* inspection and date;

18.2 Quantity accepted/rejected by inspecting agency and date;

18.3 Quantity dispatched/ delivered to consignees and date;

18.4 Quantity where incidental services have been satisfactorily completed with date

18.5 Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date

18.6 Date of completion of entire Contract including incidental services, if any; and Date of receipt of entire payments under the Contract (in case of stage-wise inspection, details required may also be specified).

SECTION III

Form No. F1: FINANCIAL BID FORMAT

Sr. No.	ITEM	Qty. (In Nos.)	Unit Price with 5 Years Warranty (In Rs.) (Without C.S.T. / VAT / Service Tax)	Total Price with 5 Years Warranty (In Rs.) (Without C.S.T. / VAT / Service Tax)	Rate of C.S.T. / VAT / Service Tax (%)
A	B	C	D	E=C*D	F
1.1	Layer 3 Switch	8			
1.2	24 Port Layer 2 Switch	308			
1.3	Mini GBIC 1000LX transceiver port	157			
1.4	RPS Power Supplies with Chassis for L3 Switches	8			
2	Gateway security Appliance	3			
3.1	3 KVA Online UPS for Central Network	11			
3.2	600 VA Line Interactive UPS	151			
4	Data Server	3			
5.1	Wireless Access Controller	23			
5.2	Wireless Access Point (Indoor Access Point)	660			
5.3	Wireless PCI Card	380			
5.4	4 Port PoE Injector	184			
6.1	Impacting Tool	3			
6.2	Crimping Tool	3			
6.3	Cable Tester	3			
7.1	42 U Rack	6			
7.2	24 U Rack	19			
7.3	12 U Rack	89			
7.4	9 U Rack	42			
8.1	Cat-6 UTP Cable - 305 Meters Box	983			
8.2	Cat-6 UTP 4Pr. Patch Cord - 1 Meter	6240			
8.3	Cat-6 UTP 4Pr. Patch Cord - 2 Meter	6240			
8.4	Cat 6 UTP Surface Single Shutter outlet with I/O Module and back box	6240			
8.5	Cat 6 UTP Shuttered Patch Panel 24 Port-Loaded with cable Manager	328			
8.6	1.5" Size PVC Cap on Casing with Accessories need to be installed where ever required. (As per Actual Qty req. at Site)	65334			
8.7	1.5" Size PVC Pipe with Accessories need to be installed where ever required. (As per Actual Qty Req at Site)	106333			
9.1	Single Mode Fiber Cable	16625			
9.2	Fiber SM-SC Couplers and Pigtail x	984			

9.3	Fiber Patch Cord SC-LC Type 9/125 Single Mode Fiber	154			
9.4	12 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	66			
9.5	24 port RM LIU - LIU Loaded with adapter plate & (with Single Mode Adapters)	8			
9.6	32 MM ISI mark HDPE Pipe for Fiber Cable (As per Actual Qty Required at Site) (In Mtr.)	14000			
9.7	25mm Class B category ISI marks GI Pipe (As per Actual Qty Required at Site) (In Mtr.)	1130			
9.8	Route Marker (to be installed on fiber route with minimum Distance of 50 mtrs.)	419			
10.1	Laying of 6 Core Single Mode Fiber Cable	16625			
10.2	Laying of HDPE pipe	14000			
10.3	Laying of GI Pipe - 25mm	1130			
10.4	Fixing of LIUs	74			
10.5	Fiber Pigtails Splicing	984			
10.6	Fiber Core Testing Charges	984			
10.7	Soft Soil Digging & Refilling	11970			
10.8	Hard Soil / Rock digging & Refilling	1790			
10.9	Asphalt Cutting - RCC Cutting	1065			
10.10	Underground Boring	324			
10.11	Fixing of Route Marker	419			
10.12	Laying of PVC Conduits / cap on casing - 1.5"	171667			
10.13	Laying of UTP Cable	299815			
10.14	Feruling , Labeling	12480			
10.15.	Termination of Information Outlet	6240			
10.16	Termination of 24 Port Jack Panel	328			
10.17.	Rack Installation with Patch cord Routing	156			
10.18	UTP Cable testing with Scanner	6240			
10.19	Site Certification	38			
10.20	Installation of Layer 3 Switch	8			
10.21	Installation of Layer 2 Switch	308			
10.22	Installation of Gateway Security Appliance	3			
10.23	Installation of Wireless Access Controller	23			
10.24	Full Time Resident Engineer during Warranty Period	3			
Grand Total					

Note:

1. **L1 will be the lowest sum total of rates of all line items without tax with 5 years warranty.**
2. **The quantity mentioned above for all line items is provisional & for evaluation purpose only. However, at the time of the implementation and billing, the actual consumption will be taken into account.**
3. **Successful Vendor will have to supply/provide goods with an Invoice from a place located within State of Gujarat.**
4. **The successful bidder has to supply & installed any other required items/Peripherals /accessories to carry out the work of Campus wide area Network in the respective colleges.**

Performa of Compliance letter/Authenticity of Information Provided

(On Non judicial Stamp paper of Rs 100/- duly attested by the First class Magistrate / Notary Public)

Date:

To,
DGM (Tech.)
Gujarat Informatics Ltd.
Block-1, 8th Floor, Udyog Bhavan,
Sector 11, Gandhinagar

Sub: Compliance with the Tender Terms and Conditions, Specifications and Eligibility Criteria

Ref: Tender no. HWT170914246.

Dear Sir,

With reference to above referred tender, I, undersigned <<Name of Signatory>>, in the capacity of <<Designation of Signatory>>, is authorized to give the undertaking on behalf of <<Name of the bidder>>.

We wish to inform you that we have read and understood the technical specification and total requirement of the above mentioned bid submitted by us on **09.10.2014.**

We hereby confirm that all our quoted items meet or exceed the requirement and are absolutely compliant with specifications mentioned in the bid document.

We also explicitly understand that all quoted items meet technical specification of the bid & that such technical specification overrides the brochures/standard literature if the same contradicts or is absent in brochures.

In case of breach of any tender terms and conditions or deviation from bid specification other than already specified as mentioned above, the decision of GIL Tender Committee for disqualification will be accepted by us.

The Information provided in our submitted bid is correct. In case any information provided by us are found to be false or incorrect, you have right to reject our bid at any stage including forfeiture of our EMD/ PBG/cancel the award of contract. In this event, GIL reserves the right to take legal action on us.

Thanking you,

Dated this _____ day of_____2014

Signature: _____
(in the Capacity of) :_____
Duly authorized to sign bid for and on behalf of
_____

Note: This form should be signed by authorized signatory of bidder

PERFORMA OF UNDERTAKING

Undertaking of Authenticity for Network Equipment Supplies

This has reference to Desktops being supplied/quoted to you vide your tender enquiry no. _____ dated _____

We hereby undertake that all the components/parts/assembly/software used in the Gateway Security Appliance /Network Equipments/Data Server under the above like Hard disk, Monitors, Memory, motherboard etc. shall be original new Components /parts/assembly/software from respective OEMs of the products and that no refurbished/duplicate/ second hand components/parts/ assembly / software are being used or shall be used.

In respect of licensed Software, we undertake that the same shall be supplied along with the authorized license certificate will our name/logo (e.g. Product Keys on Certification of Authenticity in case of Microsoft Windows Operating System). Also, that it shall be sourced from the authorized source for use in India (e.g. Authorized Microsoft Channel in case of Microsoft Operating System).

Should you require, we shall produce certificate from our OEM supplier in support of above undertaking at the time of delivery. It will be our responsibility to produce such letters from our OEM supplier's within a reasonable time.

In case we are found not complying with above at the time of delivery or during installation, for the Network Equipments / Gateway Security Appliance already billed, we agree to take back the equipment already supplied at our cost and return any amount paid to us by you in this regard and that you will have the right to forfeit our EMD / BG for this tender.

Authorized Signatory

Name:

Designation:

Note:

(i) **The signing Authority should be no lower than Company Secretary of the OEM of Switches, Gateway Security Appliance.**

(ii) **The bidders are required to upload this undertaking from the OEMs of the Switches, Gateway Security Appliance for the quoted options.**

Performa of Contract-cum-Equipment

Performance Bank Guarantee

(To be stamped in accordance with Stamp Act)

Ref: Bank Guarantee No.
Date:

To
Name and Address of the Purchaser/Indenter
_____

_____

Dear Sir,

In consideration of <<Name and Address of the Purchaser/Indenter, Government of Gujarat>> (hereinafter referred to as the OWNER/PURCHASER which expression shall unless repugnant to the context or meaning thereof include successors, administrators and assigns) having awarded to M/s. …… having Principal Office at …… (Hereinafter referred to as the "SELLER" which expression shall unless repugnant to the context or meaning thereof include their respective successors, administrators, executors and assigns) the supply of _____by issue of Purchase Order No…… Dated …… issued by <<Department Name>> for and on behalf of the OWNER/PURCHASER and the same having been accepted by the SELLER resulting into CONTRACT for supplies of materials/equipments as mentioned in the said purchase order and the SELLER having agreed to provide a Contract Performance and Warranty Guarantee for faithful performance of the aforementioned contract and warranty quality to the OWNER/PURCHASER, _____having Head Office at (hereinafter referred to as the 'Bank' which expressly shall, unless repugnant to the context or meaning thereof include successors, administrators, executors and assigns) do hereby guarantee to undertake to pay the sum of Rs._____(Rupees_____) to the OWNER/PURCHASER on demand at any time up to_____ without a reference to the SELLER. Any such demand made by the OWNER/PURCHASER on the Bank shall be conclusive and binding notwithstanding any difference between Tribunals, Arbitrator or any other authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the OWNER/PURCHASER and further agrees that the guarantee herein contained shall continue to be enforceable till the OWNER/PURCHASER discharges this guarantee. OWNER/PURCHASER shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance by the SELLER of the aforementioned CONTRACT. The OWNER/ PURCHASER shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the SELLER, and to exercise the same at any time in any manner, and either to enforce to forebear to enforce any covenants contained or implied, in the aforementioned CONTRACT between the OWNER/PURCHASER and the SELLER or any other course of or remedy or security available to the OWNER/PURCHASER.

The Bank shall not be released of its obligations under these presents by any exercise by the OWNER/PURCHAER of its liability with reference to the matters aforesaid or any of them or by reason or any other acts of omission or commission on the part of the OWNER/PURCHASER or any other indulgence shown by the OWNER/PURCHASER or by any other matter or things.

The Bank also agree that the OWNER/PUCHASER at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor, in the first instance without proceeding against the SELLER and not withstanding any security or other guarantee that the OWNER/PURCHASER may have in relation to the SELLER's liabilities.

Notwithstanding anything contained herein above our liability under this Guarantee is restricted to Rs. _____ (Rupees _____) and it shall remain in force up to and including _____ and shall be extended from time to time for such period as may be desired by the SELLER on whose behalf this guarantee has been given.

Dated at _____ on this _____ day of _____2014.

_____
Signed and delivered by

_____

For and on Behalf of

Name of the Bank and Branch and
Its official Address

List of approved Banks
All Nationalized Bank including the public sector bank or Private Sector Banks or Commercial Banks or Co-Operative Banks (operating in India having branch at Ahmedabad/Gandhinagar) as per the G.R. no. EMD/10/2013/655/DMO dated 31.03.2014 issued by Finance Department or further instruction issued by Finance department time to time.

CONTRACT FORM

THIS AGREEMENT made on the _____ day of _____, 2014 ____ between _____ *(Name of purchaser)* of _____ *(Country of Purchaser)* hereinafter "the Purchaser" of the one part and _____ *(Name of Supplier)* of _____ *(City and Country of Supplier)* hereinafter called "the Supplier" of the other part:

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz., _____ *(Brief Description of Goods and Services)* and has accepted a bid by the Supplier for the supply of those goods and services in the sum of _____ *(Contract Price in Words and Figures)* hereinafter called "the Contract Price in Words and Figures" hereinafter called "the Contract Price."

NOW THIS AGREEMENT WITHNESSETH AS FOLLOWS:

1 In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2 The following documents shall be deemed to form and be read and construed as part of this Agreement, viz. :

2.1 the Bid Form and the Price Schedule submitted by the Bidder;

2.2 terms and conditions of the bid

2.3 the Purchaser's Notification of Award

3 In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4 The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

5 Particulars of the goods and services which shall be supplied / provided by the Supplier are as enlisted in the enclosed annexure :

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

Said _____ (For the Purchaser)

in the presence of _____

Signed, Sealed and Delivered by the

said _____ (For the Supplier)

in the presence of _____

The details of the modalities and charges for Quality testing at EQDC

- The verification of the computer hardware will be carried out by GIL at Ahmedabad/Gandhinagar. The proper inspection facility has to be provided by the supplier(s) at their cost.
- The quality testing of Servers and UPS will be carried out by EQDC-Gandhinagar. The charges mentioned below for the same are to be paid directly to EQDC by the supplier(s).
- GIL/EQDC will select the samples from the entire ordered lot at Ahmedabad/Gandhinagar. The sampling plan proposed is based on the tender quantities as under:

Sr. No.	Item Category	Qty. (In Nos.)	Per Unit testing charge (In Rs.) (W/o Service tax)	Total Inspection Charge (In Rs.)
1	Server	1	212,565	212,565
2	3 KVA Online UPS	1	29,640	29,640
3	600 VA Line Interactive UPS	1	29,640	29,640
GRAND TOTAL				**271,845**

- In case, the ordered quantity varies from the tendered quantity, then the final sampling plan will be decided by GIL.
- Service Tax plus Education Cess as applicable will be levied extra.
- In case of rejection of the sample(s), the entire lot of that item may be rejected and the equal nos. of sampling will be again taken from the new produced lot. The extra cost for the same has to be bourn by the supplier.

Tests for Hardware

(i) Server (includes CPU, Monitor, Keyboard, FDD/HDD, SMPS)

Tests
Inspection of Safety Requirements
Earth Leakage Current
Dielectric Strength
Ionizing (X-ray) radiation
Conducted Susceptibility Tests
Electrostatic Discharge Test
Electrical fast Transient/Burst Test
Surge/Spike Test
Inspection of Performance Requirements
Visual Examination
Functional Performance
Effect Of Power Interruptions
Effect Of Power Supply Variations
VHF/UHF Output
Key Travel
Keyboard Controller
Actuating Force
Video Monitor Performance Test Suite
Resolution
Geometric distortion
Ripple distortion due to mains
Non-linearity due to scanning
Convergence error
Brightness
Effect of brightness variation on EFT
Humbar
FDD/HDD Performance Test Suite
▪ Capacity
▪ Recording density
▪ Track density
▪ Tracks/side
▪ Recording Method
▪ Rotational Speed

Tests
▪ Average Latency time
▪ Access time (max)
▪ Time taken from 'Power On" to "Ready"
▪ Rate of data transfer
▪ Error Rate
▪ Audible Noise
SMPS Performance Test Suite
a. Power Output
b. Output Voltage
c. Load Regulation
d. Efficiency
e. Periodic and Random Deviation (PARD)
f. Dynamic load regulation
g. Cross-Regulation
h. Over-load protection
i. In-rush Current
j. Hold-up Time
k. Power-Good Signal
Verification of Marking Requirements
Verification of Interface Requirements

(ii) UPS

Tests
Visual Examination
UPS Performance Test Suite
(a) Electrical Tests
UPS Input Test
Steady State Input Voltage Tolerance Test
Input Frequency Tolerance Test
Inrush Current Test
UPS Output Characteristics Test
Output-Normal Mode-No Load
Output-Normal Mode-Full Load
Output-Stored Energy Mode-No Load
Output-Stored Energy Mode-Full Load
Output-Normal Mode-Overload

(b) UPS Output Dynamic Characteristics Tests
Change of operating mode-Normal to stored energy mode
Change of operating mode-stored energy to Normal mode
Change of operating mode-Normal to Bypass mode (where applicable)
(c) Stored and restored energy time tests
Stored energy time test
R-stored energy time test
(d) Efficiency and input power factor
(e) High Voltage Test